EPA Question	Response	Records/Information Available
Section 1.0 - Respondent Information		
1. Provide the full legal, registered name and mailing address of Respondent.	Portland General Electric Company 121 SW Salmon Street Portland, OR 97204	
2. For each person answering these questions on behalf of Respondent, provide:		
Site Operator: Portland General Electric		
a. full name;	Arya Behbehani-Divers	
b. title;	Manager, Environmental Services	
c. business address; and	121 SW Salmon Street m/s 3WTCBR05 Portland, OR 97204	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-464-8141 Electronic Mail Address: Arya.Behbehani-Divers@pgn.com Fax Number: 503-464-8527	
Site Consultant: URS Corporation		
a. full name;	Laura McWilliams, PhD, LG; Heather Patterson	
b. title;	Senior Geologist; Environmental Scientist & Risk Assessor	
c. business address: and	111 SW Columbia, Suite 1500 Portland, OR 97225-5850	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-222-7200 Electronic Mail Address: Laura_Mcwilliams@urscorp.com; Heather_Patterson@urscorp.com Fax Number: 503-222-4292	
3. If Respondent wishes to designate an individual for all future correspondence concerning this Site, please indicate here by providing that individual's name, address, telephone number, fax number, and, if available, electronic mail address.	Arya Behbehani-Divers Portland General Electric Manager, Environmental Services 121 SW Salmon Street - 3WTCBR05 Portland, OR 97204 Tel: 503-464-8141 Fax: 503-464-8527 Electronic Mail Address: Arya.Behbehani-Divers@pgn.com	
Section 2.0 - Owner/Operator Information		
4. Identify each and every Property that	Portland General Electric Company (PGE) is preparing separate 104(e) responses for properties	Question 4 Attachment

EPA Question	Response	Records/Information Available
Respondent currently owns, leases, operates on, or otherwise is affiliated or historically has owned, leased, operated on, or otherwise been affiliated with within the Investigation Area during the period of investigation (1937 to Present). Please note that this question includes any aquatic lands owned or leased by Respondent.	within the Investigation Area. This response only applies to the Station E Substation (Station E East located at 2635 NW Front Avenue and Station E West located at 2101 NW Reed Street, Portland, Oregon). Please note that an initial response for Station E was submitted on February 28, 2009. Since that time PGE has obtained additional documents, which have been incorporated herein. This revised response (dated October 2009) replaces the earlier version. Station E East was purchased as two separate parcels, designated as Parcels A and B in the attached plat (Q04a_Station E plat1.pdf). Station E West was purchased as two separate parcels, designated as Parcels F and I in the attached plat (Q04a_Station E plat1.pdf).	Q04a_Station E plat1.pdf
a. Currently Owns	PGE currently owns the Station E Substation, which is comprised of Station E East and Station E West: • Station E East (2635 NW Front Avenue) is bounded by NW Nicolai Street on the north, NW Front Avenue on the east, NW 21st Avenue on the south, and NW Sherlock Avenue on the west. • Station E West (2101 NW Reed Street) is bounded by NW Nicolai Street on the north, NW Sherlock and NW 21st Avenue on the east, NW Reed Street on the south, and NW 22nd Avenue on the west. See the attached documents.	Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf Q04a_Station E East Plat_C26_01-20-1915.pdf Q04a_Station E East Plat_C27_01-20-1915.pdf
b. Currently Leases	Not applicable. PGE does not lease the property associated with Station E Substation.	
c. Currently Operates	PGE currently operates the Station E Substation, which is comprised of Station E East and Station E West: • Station E East is located at 2635 NW Front Avenue • Station E West is located at 2101 NW Reed Street See the documents attached in response to Question 4a.	
d. Currently otherwise affiliated with	Not applicable. There are no other properties currently affiliated with the Station E Substation.	
e. Historically Has Owned	Properties that PGE has historically owned within the Investigation Area, including the 2700 NW Front Avenue property, which was historically associated with the Station E power plant, are addressed in separate 104(e) responses. Also see the response to Question 4h.	
f. Historically Has Leased	To the best of PGE's knowledge, after reasonable inquiry, PGE either leased or had a land use agreement with the Eastern & Western Lumber Company for a portion of Parcel B for the construction and operation of the Station C steam plant from 1901 until 1904 when PGE purchased the entire parcel.	
g. Historically Has Operated	PGE historically operated the Station C steam plant from 1901 to 1907 and the Station E power plant from 1904 to 1953. For further details, see the response to Question 5g.	
h. Historically otherwise affiliated with	The 2700 NW Front Avenue property, which is located east of Station E Substation, was historically affiliated with the Station E Substation during PGE's operations of the Station E power plant (1904-1958).	Question 4 Attachment Q04h_1905 Pump House.pdf Q04h_1917 Pump House Plans-a.pdf

EPA Question	Response	Records/Information Available
	PGE purchased the 2700 NW Front Avenue property in two parcels (one parcel in 1904 and a second, adjacent parcel in 1926). An oil pipeline, water pipeline for fire protection, and a cooling water conveyance pipeline ran from the pump house (located in the Willamette River adjacent to the southeastern corner of the 2700 NW Front Avenue property), through the 2700 NW Front Avenue property, to the Station E power plant condensers (water) and the Station E underground storage tanks (USTs) (oil) at the Station E Substation property. A non-contact cooling water pipeline conveyed non-contact cooling water from the condensers at the Station E power plant to/through the 2700 NW Front Avenue property. From 1905 to approximately 1921, the pipe discharged the non-contact cooling water to a settling pond approximately 30 ft east of the western boundary of the 2700 NW Front Avenue property. In 1921, the non-contact cooling water pipe was extended through the 2700 NW Front Avenue property and from 1921 to 1953 the non-contact cooling water was discharged to the Willamette River. PGE ceased pump house and associated pipeline operations in 1953, when the Station E power plant was put into "cold stand-by service." The pump house was decommissioned (removed) sometime between 1968 and 1980. See the attached documents (Q04h_1905 Pump House.pdf, Q04h_1917 Pump House Plans-a.pdf, Q04h_1917 Pump House Plans-b.pdf, Q04h_1921 Dock and Pipe to Pump House.pdf, and Q04h_1936-1980 Pump House Location Aerials.pdf). The historical location of the pump house in relation to the Station E Substation is illustrated in Figure 1 of the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. The 2700 NW Front property was sold to Bingham-Willamette Company (now Sulzer Pumps) in 1979. PGE conducted sampling at the 2700 NW Front Avenue property in 2004 in support of the August 2005 Station E Site Investigation; see the attached access agreement (Q04h_Sulzer Pumps Access Agreement.pdf). The 2700 NW Front Avenue property, including the historical pump house and pipelines, is addressed further in a separate 104(e) response. Please note: the attached document (Q04h_2700 NW Front Ave Easement 1976.pdf) is the sewer easement that PGE granted the City of Portland in 1976 for the construction and maintenance of a sewer line at the 2700 NW Front Avenue property. This document was inadvertently not included with the 2700 NW Front Avenue property's 104(e) response and is attached here instead.	Q04h_1917 Pump House Plans-b.pdf Q04h_1921 Dock and Pipe to Pump House.pdf Q04h_1936-1980 Pump House Location Aerials.pdf Q04h_2700 NW Front Ave Easement 1976.pdf Q04h_Sulzer Pumps Access Agreement.pdf Also see Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf
5. Provide a brief summary of Respondent's relationship to each Property listed in response to Question 4 above, including the address, Multnomah County Alternative Tax lot Identification number(s), dates of acquisition, period of ownership, lease,		

EPA Question	Response	Records/Information Available
operation, or affiliation, and a brief overview of Respondent's activities at the Properties identified.		
a. Relationship	Owner	
b. Address	The Station E Substation is currently comprised of Station E East and Station E West, which are separated into two areas by NW Sherlock Avenue. The addresses are listed below: • Station E East: 2635 NW Front Avenue, Portland, OR 97210 • Station E West: 2101 NW Reed Street, Portland, OR 97210	
c. Multnomah County Alternative Tax ID #	Alternative Tax Account Numbers for the Station E Substation are: • Station E East - R766003080 and R766003120 • Station E West - R766002800, R766002750, R766002840, and R766002720 See the attached documents and the documents (Q04a_Station E plat1.pdf and Q04a_Station E colored plat1.pdf) attached in response to Question 4a.	Question 5 Attachments Q05c_Station E Tax Map.pdf Q05c_Property Detail.pdf Also see Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf
d. Date Acquired (leased)	To the best of PGE's knowledge, after reasonable inquiry, the following summarizes when PGE acquired the Station E Substation parcels: <u>Station E East</u> • PGE was granted a lease or land use agreement from the Eastern & Western Lumber Company in 1901 for a portion of Parcel B for the construction and operation of the Station C steam plant. • Parcel A (Lots 1-4 of Block 31) was purchased by PGE (as a predecessor company) on 19 January 1904 from the Eastern & Western Lumber Company. • Parcel B (Lots 5-12 of Block 32) was purchased by PGE (as a predecessor company) on 2 April 1904 from the Eastern & Western Lumber Company. <u>Station E West</u> • Parcel F (Lots A, 9, and 12 of Block 25; Lots 1-7 and portions of Lots 8, 10, and 11 of Block 26; vacated NW 21st Place; and portion of vacated NW Lumber St) was purchased by PGE on 7 March 1955 from Lester G Park. • Parcel I (Lots B, 10-11 of Block 25 and portion of Lot 2 of Block 29) was purchased by PGE in June 1972 from the Humble Oil Company (now Exxon Mobile). See the documents (Q04a_Station E plat1.pdf and Q04a_Station E colored plat1.pdf) attached in response to Questions 4a and the documents (Q07_Station E West Deed 1955.pdf and Q07_Station E West Deed 1972.pdf) attached in response to Question 7.	See Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf Also see Question 7 Attachments Q07_Station E West Deed 1955.pdf Q07_Station E West Deed 1972.pdf
e. Period of Lease	To the best of PGE's knowledge, after reasonable inquiry, PGE was granted a lease or land use agreement from the Eastern & Western Lumber Company for a portion of Parcel B for the construction and operation of the Station C steam plant from 1901 until 1904 when PGE purchased the entire parcel.	
f. Period of Ownership, Lease or	The following summarizes the periods of PGE's lease/ownership of the Station E Substation:	See Question 4 Attachments

EPA Question	Response	Records/Information Available
Operation	<u>Station E East</u> • Portion of Parcel B: 1901 to present (lease). • Parcels A and B: 1904 to present (ownership). <u>Station E West</u> • Parcel F: 1955 to present (ownership). • Parcel I: 1972 to present (ownership). See the documents (Q04a_Station E plat1.pdf and Q04a_Station E colored plat1.pdf) attached in response to Questions 4a and the documents (Q07_Station E West Deed 1955.pdf and Q07_Station E West Deed 1972.pdf) attached in response to Question 7. Also see The History of Portland General Electric Company, 1889 – 1981 attached in response to Question 77, which is part of the Supplemental Submittal S1.	Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf Also see Question 7 Attachments Q07_Station E West Deed 1955.pdf Q07_Station E West Deed 1972.pdf
g. Activities	The parcels that currently comprise Station E East (Parcels A and B) were purchased by PGE in 1904. To the best of PGE's knowledge, after reasonable inquiry, the following key activities occurred at Station E East: • In 1901, PGE constructed the Station C steam plant on Parcel B. The Station C steam plant generated power from approximately 1901 until 1907. The Station C steam plant operated on wood waste. The Station C steam plant was dismantled in 1912/1913. • In 1904, PGE constructed the Station E power plant on Parcels A and B. In 1912, with the dismantling of the Station C steam plant, PGE began using a portion of Parcel B (the area not required for the power plant) for substation operations. • The Station E power plant operated continuously from 1905 until 1930. From 1930 to 1953, it was operated only during low-water periods and for winter peak service. Power was initially generated by burning oil and wood waste. The plant was converted to a coal-fired unit during World War I, and was converted back to an oil-fired unit after World War I. In 1953, it was placed on "cold stand-by service" and, after being idle for 15 years, the power plant was retired in 1968. The eastern half of the Station E power plant building was razed in 1977 and the remaining power plant buildings and structures were razed in 1999/2000. • By 1954, Station E East was being used exclusively for substation operations. Certain parcels that currently comprise Station E West (Parcels F and I) were purchased in 1955 (Parcel F) and 1972 (Parcel I). Station E West has been used exclusively for substation operations. Current Substation Purpose: • Provide continuous electrical power to customers; and	Question 5 Attachment Q05g_1999 Final Documentation.pdf Also see Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E East Plat_C26_01-20-1915.pdf Q04a_Station E East Plat_C27_01-20-1915.pdf Also see Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf

EPA Question	Response	Records/Information Available
	• Protect public and equipment from electrical and mechanical faults. Current Substation Function: The substation functions as a distribution substation, which is an engineered and crafted collection of high voltage equipment, and which transforms higher sub-transmission voltage (57kV) to lower distribution voltage (13 kV and 11kV). High voltage switches and circuit breakers allow the circuits to be safely opened for routine maintenance or to interrupt electrical faults. Automatic operation is achieved through control, protection, telemetry, and communication systems located within the substation. As such, on-site activities are limited to maintenance, repair, and replacement of substation components as they are needed. See the attached document (Q05g_1999 Final Documentation.pdf), the site history (Section 5) presented in the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15, and The History of Portland General Electric Company, 1889 – 1981 attached in response to Question 77, which is part of the Supplemental Submittal S1. Also see the documents (Q04a_Station E plat1.pdf, Q04a_Station E East Plat_C26_01-20-1915.pdf, and Q04a_Station E East Plat_C27_01-20-1915.pdf) attached in response to Question 4a.	
6. Identify any persons who concurrently with you exercises or exercised actual control or who held significant authority to control activities at each Property, including:		
a. partners or joint ventures;	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, there are no partners or joint ventures that have exercised actual control or held significant authority to control activities at the Station E Substation.	
b. any contractor, subcontractor, or licensor that exercised control over any materials handling, storage, or disposal activity on the Property; (service contractors, remediation contractors, management and operator contractors, licensor providing technical support to licensed activities);	Environmental/engineering consultants that have designed and implemented environmental investigation and/or remediation efforts at the Station E Substation include EMCON, Geocon Northwest Inc, GeoEngineers Inc, and Bridgewater Group Inc in association with Hahn and Associates Inc. In addition, construction/demolition/remediation contractors have been present on the site, including Marine & Environmental Testing Inc, O'Sullivan Construction Inc (also known as O'Sullivan Petroleum and O'Sullivan Omega) in association with Spencer Environmental Services Inc, Eastwood Environmental Inc, Northwest Field Services Inc, Northwest Geophysical Associates Inc, JC Colhouer Demolition Company, Emerald Services Inc, and American Equipment & Supply Company. See the attached documents (Q06b_1976 Colhouer Demo.pdf and Q06b_1976 American Equipment Removal.pdf) and the reports attached in response to Question 15.	Question 6 Attachments Q06b_1976 Colhouer Demo.pdf Q06b_1976 American Equipment Removal.pdf Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_Geocon NorthWest, Inc. P1210-05-01.pdf Q15_Geocon NorthWest, Inc. P1210-05-02.pdf Q15_Geotechnical Report January 2002.pdf Q15_2005 Site Investigation - Substation E.pdf Q15_1994_PCB Air Monitoring Survey.pdf
c. any person subleasing land,	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, there are/were no	Question 6 Attachment

EPA Question	Response	Records/Information Available
equipment or space on the Property;	subleases for land, equipment, or space on the Station E Substation. It should be noted that in January 2001, PGE noticed that the Flexoprep Company had inadvertently placed equipment (two compressors) within the boundary of the Station E East property (outside of the existing security fence). PGE was in the process of constructing a new security fence closer to the property boundary when they noticed the encroachment. The Flexoprep Company was requested to remove their equipment from PGE property within 60 days. The equipment was removed. See the attached document (Q06c_2001 Property Encroachment.pdf).	Q06c_2001 Property Encroachment.pdf
d. utilities, pipelines, railroads and any other person with activities and/or easements regarding the Property;	The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the attached documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) and the document (Q07_Sewer Easement 1904.pdf) attached in response to Question 7.	Question 6 Attachments Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf Also see Question 7 Attachment Q07_Sewer Easement 1904.pdf
e. major financiers and lenders;	Not applicable. None have been identified.	
f. any person who exercised actual control over any activities or operations on the Property;	Other than PGE personnel (see the responses to Questions 6g and 6h), the consultants and contractors, as identified in the response to Question 6b, have been involved with remediation activities at Station E Substation. The City of Portland, as identified in the response to Question 6d, exercises actual control over the storm sewer line easement through Parcel B.	
g. any person who held significant authority to control any activities or operations on the Property;	Multiple individuals have had authority within PGE to access and conduct activities on this property. Many are listed on the following documents: • Bullseye articles 1956, 1957, 1958, 1959, 1960, 1961, 1963, 1967, 1971, 1973 and 1980. • Organizational charts for the years: 1980, 1982, 1984, 1986, 1988, 1989, 1990, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, and 2005 • Distribution and System Planning information. • Management structure information 1982-2007. The City of Portland exercises actual control over the storm sewer line and easement identified in the response to Question 6d. In addition, the consultants and contractors identified in response to Question 6b exercised actual control over activities at the Station E Substation.	Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf
h. any person who had a significant presence or who conducted significant activities at the Property; and	Multiple individuals have had authority within PGE to access and conduct activities on this property. Many are listed on the following documents: • Bullseye articles 1956, 1957, 1958, 1959, 1960, 1961, 1963, 1967, 1971, 1973 and 1980. • Organizational charts for the years: 1980, 1982, 1984, 1986, 1988, 1989, 1990, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, and 2005 • Distribution and System Planning information. • Management structure information 1982-2007 See the documents attached in response to Question 6g. The City of Portland exercises actual control over the storm sewer line and easement identified in the response to Question 6d. In	

EPA Question	Response	Records/Information Available
	addition, the consultants and contractors identified in response to Question 6b exercised actual control over activities at the Station E Substation.	
i. government entities that had proprietary (as opposed to regulatory) interest or involvement with regard to the activity on the Property.	To the best of PGE's knowledge, after reasonable inquiry, the City of Portland is the only government entity that has (or had) a proprietary interest or involvement at the Station E Substation. The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6d and the document (Q07_Sewer Easement 1904.pdf) attached in response to Question 7.	Question 6 Attachments Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf Also see Question 7 Attachment Q07_Sewer Easement 1904.pdf
7. Identify and describe any legal or equitable interest that you now have, or previously had in each Property. Include information regarding the nature of such interest: when, how, and from whom such interest was obtained; and when, how, and to whom such interest was conveyed, if applicable. In addition, submit copies of all instruments evidencing the acquisition or conveyance of such interest (e.g., deeds, leases, purchase and sale agreements, partnership agreements, etc.). Also provide all information and documentation regarding, but not limited to the following:	To the best of PGE's knowledge, after reasonable inquiry, the following describes the legal or equitable interest that PGE acquired for the Station E Substation parcels: <u>Station E East</u> • To the best of PGE's knowledge, after reasonable inquiry, PGE was granted a lease or land use agreement from the Eastern & Western Lumber Company for a portion of Parcel B for the construction and operation of the Station C steam plant from 1901 until 1904 when PGE purchased the entire parcel. • Parcel A (Lots 1-4 of Block 31) was purchased by PGE (as a predecessor company) on 19 January 1904 from the Eastern & Western Lumber Company. • Parcel B (Lots 5-12 of Block 32) was purchased by PGE (as a predecessor company) on 2 April 1904 from the Eastern & Western Lumber Company. <u>Station E West</u> • Parcel F (Lots A, 9, and 12 of Block 25; Lots 1-7 and portions of Lots 8, 10, and 11 of Block 26; vacated NW 21st Place; and portion of vacated NW Lumber St) was purchased by PGE on 7 March 1955 from Lester G Park. • Parcel I (Lost B, 10-11 of Block 25 and portion of Lot 2 of Block 29) was purchased by PGE in June 1972 from the Humble Oil Company (now Exxon Mobile). See the documents (Q04a_Station E plat1.pdf and Q04a_Station E colored plat1.pdf) attached in response to Questions 4a and the attached documents (Q07_Station E West Deed 1955.pdf and Q07_Station E West Deed 1972.pdf). The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the attached document (Q07_Sewer Easement 1904.pdf) and the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6d.	Question 7 Attachments Q07_Station E West Deed 1955.pdf Q07_Station E West Deed 1972.pdf Q07_Sewer Easement 1904.pdf Also see Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf Also see Question 6 Attachments Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf
a. any deeds and/or transfer information between Respondent and Dulien Steel Products;	Not applicable. Question 7a is relevant only to the Rivergate North Substation. Information regarding this question is given in the separate 104(e) response for that site.	
b. deed and title information for	Not applicable to the Station E Substation.	

EPA Question	Response	Records/Information Available
Parcels R971340160, R971340180, R971350100, R971350480, R941191230, R971340130 and R971340200;		
c. a complete copy of the Memorandum of Contract Book 1292 p.616 for parcel R941191230, dated September 5, 1978;	Not applicable to the Station E Substation.	
8. If you are the current owner and/or current operator, did you acquire or operate the Property or any portion of the Property after the disposal or placement of hazardous substances, waste, or materials on, or at the Property? Describe all of the facts on which you base the answer to this question.	To the best of PGE's knowledge, after reasonable inquiry, PGE had no reason to know of the disposal or placement of hazardous substances, waste, or materials on or at any part of the Property that may have occurred prior its acquisition by PGE. To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the Property prior to PGE taking ownership.	
9. At the time you acquired or operated the Property, did you know or have reason to know that any hazardous substance, waste, or material was disposed of on, or at the Property? Describe all investigations of the Property you undertook prior to acquiring the Property and all of the facts on which you base the answer to this question.	To the best of PGE's knowledge, after reasonable inquiry, PGE had no reason to know of the disposal or placement of hazardous substances, waste, or materials on or at any part of the Property that may have occurred prior its acquisition by PGE. To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the Property prior to PGE taking ownership.	
10. Identify all prior owners that you are aware of for each Property identified in Response to Question 4 above. For each prior owner, further identify if known: a. The dates of ownership b. All evidence showing that they	To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the information PGE has regarding prior owners of the Station E Substation: <u>Station E East</u> According to the plats (Q04a_Station E plat1.pdf and Q04a_Station E colored plat1.pdf) attached in response to Question 4a, the two parcels that currently comprise Station E East (Parcels A and B) were purchased from the Eastern & Western Lumber Company in 1904. The 1901 Sanborn map (Q10_Station E Sanborn Maps.pdf) shows that Parcel A and the northeastern portion of Parcel B was occupied by several buildings, one of which was the	Question 10 Attachment Q10_Station E Sanborn Maps.pdf

EPA Question	Response	Records/Information Available
controlled access to the Property c. All evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at the Property during the period that they owned the Property.	Hotel Villard and another was the future location of the Station C steam plant, and the remainder of Parcel B was covered by Eastern & Western Lumber Company wood piles. <u>Station E West</u> The parcels that comprise Station E West were purchased from Lester G Park in 1955 (Parcel F) and from the Humble Oil Company (now ExxonMobil) in 1972 (Parcel I); see the documents (Q07_Station E West Deed 1955.pdf and Q07_Station E West Deed 1972.pdf) attached in response to Question 7. The attached Sanborn maps (Q10_Station E Sanborn Maps.pdf) show Station E West in 1901, 1908, 1950, and 1969. The 1901 Sanborn map shows that the property had a lumber shed, hose house, storage shed, a couple of small unidentified buildings, and several lumber piles owned by the Nicolai Brothers Company. The 1908 Sanborn map shows that the property had a lumber shed, engine house, wood shed, a couple of small unidentified buildings, and several lumber piles owned by the Nicolai-Nabbach Company, as well as a hotel (owner not identified) in the southeastern corner of Station E West. The 1950 Sanborn map of the property shows the hotel building in the southeastern corner of the property and two small buildings in the northwestern portion of the property (one of which is labeled as "Rest."); the owner of Parcels F and I may have been Standard Brands Inc. The 1969 Sanborn map shows that Parcel F was being used by PGE and that Parcel I was used for parking and had a small building (labeled as Gas & Oil); the owner of Parcel I may have been Standard Brands Inc. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further knowledge or records of prior owners or operations on the Property. To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the properties prior to PGE's acquisition. To the best of PGE's knowledge, after reasonable inquiry, PGE has no knowledge of a hazardous substance, pollutant, or contaminant that was released or threatened to be released at the properties prior to PGE's purchase.	Also see Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf Also see Question 7 Attachments Q07_Station E West Deed 1955.pdf Q07_Station E West Deed 1972.pdf
11. Identify all prior operators of the Property, including lessors, you are aware of for each Property identified in response to Question 4 above. For each such operator, further identify if known: a. the dates of operation; b. the nature of prior operations at the Property; c. all evidence that they controlled access to the Property; and d. all evidence that a hazardous	See the responses to Questions 4 through 7 and Question 10, as well as the documents attached in response to Question 4a (Q04a_Station E plat1.pdf and Q04a_Station E colored plat1.pdf) and Question 10 (Q10_Station E Sanborn Maps.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE does not have information on prior operations on the Property other than the information contained in the responses to Questions 5g, 6d, 7, and 10, above.	See Question 4 Attachments Q04a_Station E plat1.pdf Q04a_Station E colored plat1.pdf Also see also Question 10 Attachment Q10_Station E Sanborn Maps.pdf

EPA Question	Response	Records/Information Available
substance, pollutant, or contaminant was released or threatened to be released at or from the Property during the period that they were operating the Property		
12. If not included in response to any of the previous questions, please describe the purpose and duration of each aquatic lands lease Respondent or the operator of Respondent's Property(ies) ever obtained from the State of Oregon and provide a copy of each application for and aquatic lands lease obtained.	Not applicable. The Station E Substation is not adjacent to the Willamette River. To the best of PGE's knowledge, after reasonable inquiry there is/was no aquatic land lease associated with the Station E Substation or the submersible land adjacent to 2700 NW Front Ave property (including where the pump house was located); see the response to Question 4h.	
Section 3.0 - Description of Each Property		
13. Provide the following information about each Property identified in response to Question 4:		
a. property boundaries, including a written legal description;	The Station E Substation is separated into two areas by NW Sherlock Avenue: Station E East (located at 2635 NW Front Avenue) and Station E West (located at 2101 NW Reed Street): • Station E East is approximately 1.5 acres and is bounded to the northwest by NW Nicolai Street, to the southeast by a gravel parking lot on NW 21st Avenue, to the northeast by NW Front Avenue, and to the southwest by railroad tracks and NW Sherlock Avenue. • Station E West is approximately 1.75 acres and bounded to the northeast by NW Sherlock, to the south by Reed Avenue, to the west by NW 22nd Avenue, and to the northwest by NW Nicolai Street. The legal description of Station E Substation is Lots 1-4 in Block 31, Lots 5-12 in Block 32, vacated Rock Street, Lots 10, 11, and B in Block 25, Lot 2 in Block 29, Lots 9, 12, and A in Block 25, Sherlocks Addition, vacated Blackstone Street, and Block 26, Township 1 North, Range 1 East, of the Willamette Meridian, County of Multnomah, and State of Oregon. See the documents (Q04a_Station E colored plat1.pdf and Q04a_Station E plat1.pdf) attached in response to Question 4a and the document (Q05c_Property Detail.pdf) attached in response to Question 5c.	See Question 4 Attachments Q04a_Station E colored plat1.pdf Q04a_Station E plat1.pdf Also see Question 5 Attachment Q05c_Property Detail.pdf

EPA Question	Response	Records/Information Available
b. location of underground utilities (telephone, electrical, sewer, water main, etc.);	There are 16 underground 11kV and 13kV feeder power lines leaving the Station E Substation in multiple directions: 10 lines leaving Station E East and six lines leaving Station E West. These copper underground feeder lines are insulated cables routed in either clay/concrete duct banks or PVC conduit. The conduits/cables are buried at various depths with the minimum being approximately 3 feet below the ground surface (bgs). Each feeder line runs from a feeder circuit breaker inside of the substation to pulling/sectionalizing vaults or a pole outside of the substation. These cables and conduits are used as 11kV and 13kV feeder line getaways to distribute power within the nearby community. The Fieldview print (Q13b_Field View Print - Station E Substn.pdf) shows the approximate location of the ten underground feeder line getaways leaving Station E East (labeled E-11021, E-11040, E-11041, E-11043, E-11047, E-11064, E-13141, E-13148, E-13144, and E-13150), and the six underground feeder line getaways leaving Station E West (labeled E-11039, E-11042, E-13139, E-13140, E-13145, and E-13149). The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the attached document (Q13b_Sewer Pipes near Station E.pdf), the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6d, and the document (Q07_Sewer Easement 1904.pdf) attached in response to Question 7. For further details, see the responses for Questions 13i and 18. There were floor drains and lavatories located within the Station E power plant building until at least 1975, and it is possible that they were connected to the City of Portland's sewer system; however, the power plant was not used after 1953 and all structures and foundations were removed by 2000. To the best of PGE's knowledge, after reasonable inquiry, there are currently no sanitary or combined sewer connections at the Station E Substation, nor any that directly serve this property. The closest sanitary sewer line is located along NW Nicolai Street and NW Sherlock Avenue. Municipal water lines are shown in the attached water maps (Q13b_Station E East Water.pdf and Q13b_Station E West Water.pdf). Also see the figures attached in response to Question 13l, below.	Question 13 Attachments Q13b_Field View Print - Station E Substn.pdf (CEII[1]) Q13b_Sewer Pipes near Station E.pdf Q13b_Station E East Water.pdf Q13b_Station E West Water.pdf Also see Question 6 Attachment Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf Also see Question 7 Attachment Q07_Sewer Easement 1904.pdf
c. location of all underground pipelines whether or not owned, controlled or operated by you;	For utility pipelines (e.g., sewer and water pipelines), see the response to Question 13b. An oil pipeline, water pipeline for fire protection, and a cooling water conveyance pipeline ran from the pump house (located on the western shore of the Willamette River, adjacent to the historically PGE-owned 2700 NW Front Avenue property), through the 2700 NW Front Avenue property, to the Station E power plant condensers (water) and USTs (oil) at Station E East. A non-contact cooling water pipeline conveyed non-contact cooling water from the condensers at the Station E power plant to/through the 2700 NW Front Avenue property. A fourth water pipeline delivered water from the City of Portland water main located in NW Front Street to several fire hydrants in the yard and to the two water tanks in the yard. A second oil pipeline delivered oil from the Northern Pacific Railway oil filling line located in the southwest corner of	Question 13 Attachments Q13c_Station E East Plat_06-21-1913.pdf Q13c_Oil Tanks and Piping_03-03-1913.pdf Also see Question 10 Attachment Q10_Station E Sanborn Maps.pdf

[1] Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

EPA Question	Response	Records/Information Available
	Station E East to the USTs. The attached 1913 plats (Q13c_Station E East Plat_06-21-1913.pdf and Q13c_Oil Tanks and Piping_03-03-1913.pdf) illustrate the historical location of the oil and water pipelines within Station E East. PGE operated the pump house and associated pipelines from 1905 to 1953, when the Station E power plant was put in "cold stand-by service." The 2700 NW Front Avenue property, including the historical pump house and pipelines within that property, is addressed further in a separate 104(e) response. Please note, to the best of PGE's knowledge, after reasonable inquiry, PGE does not know the significance or meaning of the text "United Railways Co Sub-Station" next to the 1,520-barrel oil UST, which is shown on the attached (Q13c_Station E East Plat_06-21-1913.pdf). To the best of PGE's knowledge, after reasonable inquiry, the United Railways Co did not historically have a substation on the property. The 1901 Sanborn map (Q10_Station E Sanborn Maps.pdf) attached in response to Question 10 indicates that this portion of the property was historically the location of the Hotel Villard.	
d. surface structures (e.g., buildings, tanks, pipelines, etc.);	<u>Historical Structures</u> Station C steam plant - In 1901, the Station C steam plant building was constructed and contained two 125-cycle "alternator" generators and 14 small boilers, which supplied steam to a single 1,600-hp engine. See the attached 1904 photograph (Q13d_1904 Station C Generators.pdf) of the generators. By 1905, the Station C building contained: an 800-kW (500-V) railway service generator, rope-driven by the original 1,600-hp engine; a 750-kW (10,000-V) 33-cycle generator, rope-driven by a 1,000-hp cross-compound condensing engine; and two marine-type, compound steam engines direct-connected to a 400-kW (550-V) railway generator. Station C operations ceased in 1907. According to the 1913 plat (Q13c_Station E East Plat_06-21-1913.pdf) attached in response to Question 13c, the Station C building contained a DC generator and engine, an AC generator and engine, boilers, rotaries, motor generator, AB transformers, and other small equipment. The Station C steam plant was dismantled sometime around 1912/1913 and the parcel was then used for the Station E power plant and substation operations. Station E power plant - Over the years, many changes and additions were made to the generating equipment at the Station E power plant. In 1904, the Station E power plant consisted of two marine-type compound condensing engines, each directly connected to generators, and two vertical Curtis steam generating units. The steam turbines were placed in service in May 1905. The boiler plant, with 10 water tube boilers equipped for either wood waste or oil firing, supplied the steam. In November 1910, two rotary converters for railway services had been installed in the turbine room and a motor generator set for "commercial" DC service was added in 1912. A steam turbine generator was installed in 1913. According to the 1913 plats (Q13c_Station E East Plat_06-21-1913.pdf and Q13_Oil Tanks and Piping_03-03-1913.pdf, attached in response to Question 13c), the Station E power plant consisted of five boilers located in the boiler room; five engines/turbines located in the generator room with	Question 13 Attachments Q13c_Station E East Plat_06-21-1913.pdf Q13c _Oil Tanks and Piping_03-03-1913.pdf Q13d_1904 Station C Generators.pdf Q13d_1905 Station E Generators-Engines.pdf Q13d_Station E Equipment.pdf Q13d_1908 Engine Room Plans-a.pdf Q13d_1908 Engine Room Plans-b.pdf Q13d_1915 Boiler Foundation Plans.pdf Q13d_1925 Furnace Plans.pdf Q13d_1948-06-02 Stack Foundation Plans.pdf Q13d_1951 Door for Engine Room Plans.pdf Q13d_1951 UST Detail.pdf Q13d_1957 Station E Construction.pdf Q13d_1975 Fence Plan.pdf Q13d_1975 West Retaining Wall and Grading Plan.pdf Q13d_1982-2002 Operating One-Line Diagrams.pdf Q13d_1987 Fence Plan.pdf (CEII[1]) Q13d_1993 East Foundation and Fence Plan.pdf Q13d_1994 West Site Plan.pdf (CEII[1]) Q13d_2002 West Site Plan.pdf (CEII[1]) Q13d_2005 West Fence and Location Plan.pdf (CEII[1]) Also see Question 5 Attachments Q05g_1999 Final Documentation.pdf

[1] Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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	associated bussing, condenser pit, and small equipment; four USTs for oil storage in the yard; a smoke stack; two water tanks; a stock house with associated motor house and hopper; and a sawdust conveyor. During World War I, two new boilers with coal stokers were installed at the Station E power plant. In 1920, a second steam turbine generator was added to replace two previously removed steam engines. One of the original vertical turbines was dismantled in 1927. By 1936, substation equipment, including three transformers, was present southeast of the Station E power plant. By 1948, additional substation equipment was present, including a new transformer bank and a new smoke stack foundation; see the attached document (Q13d_1948-06-02 Stack Foundation Plans.pdf). The attached documents spanning the years 1908-1951 show the plans for various Station E power plant equipment/structures. The Station E power plant was placed on "cold stand-by service" in 1953 and, after being idle for 15 years, the power plant was retired in 1968. The eastern half of the Station E power plant building was razed in 1977 and the remaining power plant buildings and structures were razed in 1999/2000. By 1954, Station E East was being used exclusively for substation operations. The attached documents spanning the years 1975-2005 show the plans for various Station E substation equipment/structures. Also see the attached photographs (Q13d_1905 Station E Generators-Engines.pdf, Q13d_Station E Equipment.pdf, Q13d_1957 Station E Construction.pdf), the document (Q05g_1999 Final Documentation.pdf) attached in response to Question 5g, the documents (Q15_2005 Site Investigation - Substation E.pdf and Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, The History of Portland General Electric Company, 1889 – 1981 attached in response to Question 77, which is part of the Supplemental Submittal S1, the hardcopy of Electrifying Eden, which was provided in a separate submittal, and the transformer capacity records, which were provided in Supplemental Submittal S8. Current Substation Structures In addition to the concrete pulling/sectionalizing vaults and poles described in 13b, the following is a description of the other structures currently located on the Station E Substation. Station E East Distribution Yard Buildings: • Control building – houses protective relays, telemetry, and control equipment. • Switchgear building – houses medium voltage power equipment, protective relays, telemetry and control equipment Structures: • Transmission structure – supports high voltage conductors and switches. • Distribution structure – supports medium voltage conductors and switches. Equipment: • Power circuit breakers – 4 • Power transformer – 6	Also see Question 15 Attachments Q15_2005 Site Investigation - Substation E.pdf Q15_UST Removal and Remediation 1995.pdf

EPA Question	Response	Records/Information Available
	• Station service transformer – 6 • Metering transformers – 8 • Regulators – 18 • Capacitor banks – 4 Station E West Distribution Yard Buildings: • Control building – houses protective relays, telemetry, and control equipment. Structures: • Transmission structure – supports high voltage conductors and switches. • Distribution structure – supports medium voltage conductors and switches. • Transmission capacitor structure – supports high voltage capacitor banks Equipment: • Power circuit breakers – 10 • Power transformers – 5 • Station service transformers – 3 • Metering transformers – 13 • Regulators – 15 • Capacitor banks – 3	
e. over-water structures (e.g., piers, docks, cranes, etc.);	Not applicable. The Station E Substation is not adjacent to the Willamette River and does not have any over-water structures. See the response to Question 4h and the separate 104(e) response for the 2700 NW Front Avenue property for information concerning the pump house that was historically associated with the Station E power plant.	
f. dry wells;	The stormwater control system and secondary spill containment system at Station E East discharges to a pit filled with rock (the former location of a UST that was removed in 2004), which functions as a dry well This feature can be seen on the figure (Q19_2009_SPCC Facility Diagram East.pdf) attached in response to Question 19. To the best of PGE's knowledge, after reasonable inquiry, there are no dry wells at Station E West. See the responses to Questions 13i and 19 for further information on the stormwater control system and secondary spill containment system and the responses to Questions 15 and 21, specifically the August 2005 site investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15 for more information on the removal of the UST.	See Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf Also See Question 19 Attachment Q19_2009_SPCC Facility Diagram East.pdf (CEII[1])
g. treatment or control devices (e.g., surface water, air, groundwater, Resource Conservation and Recovery Act (RCRA), Transfer, Storage, or Disposal (TSD), etc.);	Other than the stormwater control and secondary spill containment system described in response to Questions 13i and 19, there are no treatment or control devices at the Station E Substation.	

[1] Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

EPA Question	Response	Records/Information Available
h. groundwater wells, including drilling logs;	Historically, there was a well associated with Station C; see the document (Q13c_Station E East Plat_06-21-1913.pdf) attached in response to Question 13c. However, Station C was dismantled in 1912/1913. To the best of PGE's knowledge, after reasonable inquiry, PGE did not have any wells at the Station E Substation property after 1913 and does not currently have any wells at the Station E Substation. Also see the attached log (Q13h_COP_Front and Nicolai_monitoring well.pdf) for a monitoring well located adjacent to Station E East at NW Nicolai St and NW Front Ave, which was installed by the City of Portland.	Question 13 Attachments Q13c_Station E East Plat_06-21-1913.pdf Q13h_COP_Front and Nicolai_monitoring well.pdf
i. stormwater drainage system, and sanitary sewer system, past and present, including septic tank(s) and where, when and how such systems are emptied and maintained;	The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6d and the document (Q07_Sewer Easement 1904.pdf) attached in response to Question 7. To the best of PGE's knowledge, after reasonable inquiry, the Station E Substation does not have and never has had a direct connection to this stormwater line. The SPCC Plans (Q19_Station E East_SPCC Plan.pdf and Q19_Station E West_SPCC Plan.pdf) attached in response to Question 19 incorrectly state on page 1 that "surface runoff is drained from the site by way of municipal storm sewer, which drains directly to the Willamette River." To the best of PGE's knowledge, after reasonable inquiry, stormwater does not, and has not, run off the property. To the best of PGE's knowledge, after reasonable inquiry, prior to 2004/2006 stormwater historically infiltrated through the gravel surface at Station E Substation. Since 2004 when PGE upgraded the stormwater control and secondary spill containment system at Station E East, stormwater falling within the lined containment area at Station E East has been, and is currently, discharged into a pit filled with rocks. Since 2006 when PGE upgraded the stormwater control and secondary spill containment system at Station E West, stormwater falling within the lined containment area at Station E West has been, and is currently, discharged into a system of draining trenches through which it infiltrates. into the ground. This error is being corrected in the revised SPCC plans currently under development. To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate any records describing the site's stormwater drainage prior to 1985; however, it is reasonable to assume it infiltrated through the gravel surface at Station E Substation. After 1985, site stormwater drained into the site's sand filter trenches and then infiltrated into the ground. See the documents (Q19_d10117a0_Oil Containment System.pdf and Q19_d10076a4_Oil Containment System.pdf) attached in response to Question 19. The sand filter trenches were installed around portions of the perimeter of the substation as part of the stormwater control and secondary spill containment system at Station E East and Station E West. The purpose of the secondary spill containment system is to contain oil from power equipment in case of leaks or failures. See the response to Question 19 for further information. Upgrades to the stormwater control and secondary spill containment system were completed at	See Question 6 Attachments Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf Also see Question 7 Attachment Q07_Sewer Easement 1904.pdf Also see Question 19 Attachments Q19_Station E East_SPCC Plan.pdf Q19_Station E West_SPCC Plan.pdf Q19_d10117a0_Oil Containment System.pdf Q19_d10076a4_Oil Containment System.pdf Q19_c29444a1_Oil Containment System.pdf (CEII[1]) Q19_c29444b1_Oil Containment System.pdf Q19_c29444c1_Oil Containment System.pdf Q19_c30658a1_Oil Containment System.pdf (CEII[1]) Q19_c30659a1_Oil Containment System.pdf (CEII[1]) Q19_c30659b1_Oil Containment System.pdf (CEII[1]) Q19_c30659c0_Oil Containment System.pdf Q19_2009_SPCC Facility Diagram East.pdf (CEII[1]) Q19_2009_SPCC Facility Diagram West.pdf (CEII[1])

[1] Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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	Station E East in 2004 and at Station E West in 2006. The upgrades to the stormwater control and secondary spill containment system at Station E East are illustrated in the documents (Q19_c29444a1_Oil Containment System.pdf, Q19_c29444b1_Oil Containment System.pdf, Q19_c29444c1_Oil Containment System.pdf, and Q19_2009_SPCC Facility Diagram East.pdf) attached in response to Question 19 and included: • Removal of the old sand filter trenches, • Addition of liner(s) under the majority of oil-filled equipment, • Addition of new oil spill containment pits, • Addition of J-drains within the lined area, which drain into the oil spill containment pit, and • Addition of piping that drains stormwater from the oil spill containment pit into another pit filled with rocks (the former location of a UST that was removed in 2004) below the liner. The upgrades to the stormwater control and secondary spill containment system at Station E West are illustrated in the documents (Q19_c30658a1_Oil Containment System.pdf, Q19_c30659a1_Oil Containment System.pdf, Q19_c30659b1_Oil Containment System.pdf, and Q19_c30659c0_Oil Containment System.pdf, and Q19_2009_SPCC Facility Diagram West.pdf) attached in response to Question 19 and included: • Removal of the old sand filter trenches, • Addition of berms and liner(s) around/under the majority of oil-filled equipment, • Addition of new oil spill containment pits, to which stormwater from within the liner drains, and • Addition of piping that drains stormwater from the oil spill containment pits into the drainage trenches where stormwater then infiltrates into the ground. Storm water falling outside the stormwater control and secondary containment systems (lined areas) at Station E East and Station E West infiltrates through the gravel surface covering those portions of the site. There were floor drains and lavatories located within the Station E power plant building until at least 1975, and it is possible that they were connected to the City of Portland's sewer system; however, the power plant was not used after 1953 and all structures and foundations were removed by 2000. To the best of PGE's knowledge, after reasonable inquiry, there are currently no operating sanitary or combined sewer lines that service the Station E Substation.	
j. subsurface disposal field(s), Underground Injection Control (UIC) wells, and other underground structures (e.g., underground storage tanks (USTs); and where they are located, if they are still used, and how they were	To the best of PGE's knowledge, after reasonable inquiry, the Station E Substation had four USTs associated with the historical Station E power station. The four USTs were initially decommissioned in-place in approximately 1968 by removing the contents and filling the tanks with sand, slurry, or water according to the standard practices at that time; see Page 1-1 of the document (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15. Three of these USTs (560-, 1,520-, and 2,140-barrel) that historically stored fuel oil (e.g.,	See Question 7 Attachment Q07_Station E West Deed 1972.pdf Also see Question 10 Attachment Q10_Sanborn Maps.pdf Also see Question 15 Attachments

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closed.	bunker fuel) were decommissioned and removed in 1993/1994 in the northwest area of Station E East. Prior to the removal of the 1,520- and 2,140-barrel USTs in 1993/1994, the contents were remediated via in situ systems (in situ treatment systems were installed, operated, and monitored). Permits were obtained to dispose of the remediated water into the sanitary sewer system via a temporary connection permitted for this specific occurrence. For further information, please see the February 1995 UST Removal and Remediation (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15. The fourth UST (2,140-barrel) that historically stored fuel oil (e.g., bunker fuel) was decommissioned and the steel liner was removed in 2004 by Bridgewater Group and Hahn and Associates, Inc. For further information, please see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf), attached in response to Question 15. Please note, there may also have been oil tanks located on Parcel I, which PGE purchased from Humble Oil Company (now Exxon Mobile) in 1972; see the document (Q07_Station E West Deed 1972.pdf) attached in response to Question 7 and the document (Q10_Station E Sanborn Maps.pdf) attached in response to Question 10. To the best of PGE's knowledge, after reasonable inquiry, however, PGE has no information regarding any such fuel tanks on the Humble Oil property (Parcel I) prior to PGE's purchase. The stormwater control system and secondary spill containment system at Station E East discharges to a pit filled with rock (the former location of a UST that was removed in 2004), which functions as a UIC. This feature is labeled as a drywell on the figure (Q19_2009_SPCC Facility Diagram East.pdf) attached in response to Question 19.	Q15_2005 Site Investigation - Substation E.pdf Q15_UST Removal and Remediation 1995.pdf
k. any and all major additions, demolitions or changes on, under or about the Property, its physical structures or to the Property itself (e.g., stormwater drainage, excavation work); and any planned additions, demolitions or other changes to the Property;	To the best of PGE's knowledge, after reasonable inquiry, the Station E Substation has undergone a series of modifications since its first use as a power plant. Major modifications include: • The construction of the Station C steam plant on Parcel B in 1901. • The construction of the Station E power plant on Parcel A and B in 1904. • The Station C steam plant was dismantled by 1912/1913. • Addition of substation equipment to Station E East (Parcel B) by 1912. • By 1913, the Station E power plant consisted of five boilers located in the boiler room and five engines/turbines located in the generator room. • Construction and installation of the four USTs in approximately 1913. • Removal of the eastern half of the Station E power plant in 1953. • Development of Station E West substation on Parcel F in 1955. • Automation of the Station E Substation in 1957 (installation of automatic and supervisory control equipment to convert the manned substation to an unmanned substation). • Decommissioning of the four USTs in-place in approximately 1968 by removing the contents and filling with sand, slurry, or water. • Expansion of Station E West substation onto Parcel I in 1972. • Removal of boiler room and stack house in 1976/1977. • Installation of an oil containment system by 1985.	Question 13 Attachments Q13k_Station E Substation List of Materials.pdf Q13k_1977-1979 Job Authorizations.pdf Also see Question 5 Attachments Q05g_1999 Final Documentation.pdf Also see Question 15 Attachments Q15_2005 Site Investigation - Substation E.pdf Q15_UST Removal and Remediation 1995.pdf

EPA Question	Response	Records/Information Available
	• Commencement of expansion and upgrades to Station E East and Station E West yards in 1993. • Removal of three of the four USTs and surrounding petroleum hydrocarbon-containing soil in 1993/1994. • Removal of approximately 170,000 kg (18.7 tons) of petroleum hydrocarbon- and polychlorinated biphenyl (PCB)-containing soil and gravel from Station E East and Station E West in 1994 during the Station E Substation enlargement and upgrading, which commenced in 1993. • Removal of the remaining power plant buildings/structures, including the stack house foundation and petroleum hydrocarbon-containing soil, in 1999/2000. • Upgrades to the oil containment system at Station E East in 2004. • Removal of the fourth UST's steel liner and approximately 1,280 tons of surrounding petroleum hydrocarbon-containing soil in 2004. • Upgrades to the oil containment system at Station E West in 2006. • Excavation and/or removal of soil, as needed, during construction/demolition activities and in response to site equipment spills. See the response to Question 13d for a description of the historical and current substation structures. For further historical information, see the response and document (Q05g_1999 Final Documentation.pdf) attached for Question 5g; the documents (Q15_2005 Site Investigation - Substation E.pdf and Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15; The History of Portland General Electric Company, 1889 – 1981 attached in response to Question 77, which is part of the Supplemental Submittal S1; the hardcopy of Electrifying Eden, which was provided in a separate submittal; and the transformer capacity records, which are provided in a supplemental submittal (Supplemental Submittal S8). Also see the attached documents (Q13k_Station E Substation List of Materials.pdf and Q13k_1977-1979 Job Authorizations.pdf), which list the materials added and removed over time, and job authorizations in the late 1970s, respectively. PGE does not have any major additions/demolitions planned, other than to continue to use the Property as an unmanned substation.	
l. all maps and drawings of the Property in your possession; and	See the attached figures. Also see the figures attached in response to other questions herein.	Question 13 Attachments Q13l_1976 Recon Sewer 21st Ave.pdf Q13l_ce2358a0_Ducts and Manholes.pdf (CEII[1]) Q13l_Handwritten Drainage Figure.pdf Q13l_General Layout.pdf (CEII[1]) Q13l_1985 Vicinity Figure.pdf Q13l_Steam Plant and Substation.pdf (CEII[1]) Q13l_Station E East Diagram.pdf (CEII[1]) Q13l_Station E Oil Pumps.pdf
m. all aerial photographs of the	The attached aerial photographs (Q13m_1936 Aerial.pdf, Q13m_1940 Aerial.pdf, Q13m_1948	Question 13 Attachments

[1] Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

EPA Question	Response	Records/Information Available
Property in your possession.	Aerial.pdf, Q13m_1957 Aerial.pdf, Q13m_1963 Aerial.pdf, Q13m_1975 Vicinity Layout.pdf, Q13m_1980 Aerial.pdf, Q13m_1991 Aerial.pdf, and Q13m_2001 Aerial.pdf) show the Station E Substation vicinity in 1936, 1940, 1948, 1957, 1963, 1975, 1980, 1991, and 2001. Aerial photos are also available via Google Maps, Google Earth, and Portland Maps. A current aerial photo of the Property from Portland Maps is attached (Q13m_Aerial photo.pdf).	Q13m_1936 Aerial.pdf Q13m_1940 Aerial.pdf Q13m_1948 Aerial.pdf Q13m_1957 Aerial.pdf Q13m_1963 Aerial.pdf Q13m_1975 Vicinity Layout.pdf Q13m_1980 Aerial.pdf Q13m_1991 Aerial.pdf Q13m_2001 Aerial.pdf Q13m_Aerial photo.pdf
n. all information requested in (a) through (m) above regarding, but not limited to, the following:		
i. the Portland General Electric Station L location on 1841 SE Water Ave;	See the separate 104(e) response for Station L.	
ii. the Portland General Electric Station E location on 2635 NW Front Ave;	Responses 13a through 13m are applicable to the Station E Substation: Station E East (2635 NW Front Avenue) and Station E West (2101 NW Reed Street).	
iii. the Portland General Electric Station N location on 6616 N Lombard St.;	See the separate 104(e) response for Station N.	
14. For Properties adjacent to the Willamette River, provide specific information describing the river-ward boundary of private ownership and where state aquatic lands and/or state-management jurisdiction begins. Provide a map that delineates the river-ward boundary of each Property.	Not applicable. The Station E Substation is not adjacent to the Willamette River. As previously mentioned in response to Question 4h, a pump house and associated pipelines adjacent to/within the 2700 NW Front Avenue property (historically owned by PGE) were historically associated with the Station E power plant. The 2700 NW Front Avenue property, including the pump house and associated pipelines on that property, is addressed in a separate 104(e) response.	
15. For each Property, provide all reports, information or data you have related to soil, water (ground and surface), or air quality and geology/hydrogeology at and about each Property. Provide copies of all	To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the reports, information, or data PGE has related to soil, water (ground and surface), or air quality, and geology/hydrogeology at Station E Substation: In 1993, PGE commenced enlarging and upgrading the Station E Substation. As part of the enlargement and upgrading, PGE assessed the contents of three previously decommissioned USTs at Station E East. Based upon the assessment, PGE decided to remove the USTs and	Question 15 Attachments Q15_1993-11-24.pdf Q15_1993-12-29.pdf Q15_1994-04-18.pdf Q15_1994-04-26.pdf Q15_1994-05-04.pdf Q15_1994-06-07.pdf

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documents containing such data and information, including both past and current aerial photographs as well as documents containing analysis or interpretation of such data.	remediate (remove) approximately 5,145 tons of the surrounding petroleum hydrocarbon-containing soil in 1993/1994. The attached February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) summarizes the assessment and remediation. Analytical results from the soil and UST water testing conducted during the removal of the three USTs and associated petroleum-impacted soil are located in Appendices A and B of the report (Q15_UST Removal and Remediation 1995.pdf), as well as in the attached documents (Q15_1993-11-24.pdf and Q15_1993-12-29.pdf). Appendix G of the attached February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) presents the 1994 geophysical site investigation for Station E East. Also see the attached document (Q15_1993 Technical Specs for USTs.pdf), which provides the technical specifications for the removal of the USTs and backfilling. During the enlarging and upgrading of Station E Substation, PGE also characterized the soil/gravel and concrete at Station E East and Station E West for potential PCB contamination. The results from the PCB soil testing are attached (Q15_1994-04-18.pdf, Q15_1994-04-26.pdf, Q15_1994-05-04.pdf, Q15_1994-06-07.pdf, Q15_1994-09-01.pdf, Q15_1994-09-02.pdf, Q15_1994-09-09a.pdf, Q15_1994-09-09b.pdf, Q15_1994-09-15a.pdf, and Q15_1994-09-15b.pdf). The characterization of the soil identified locations of PCB contamination. In 1994, PGE remediated (removed) approximately 170,000 kg (18.7 tons) of petroleum hydrocarbon- and PCB-containing soil and gravel from Station E East and Station E West and disposed of it at the Arlington Landfill; see the response to Question 21. In addition, PGE had Marine & Environmental Testing Inc perform PCB air monitoring during the remediation activities in 1994; see the attached document (Q15_1994_PCB Air Monitoring Survey.pdf). In 1999/2000, PGE removed the remaining Station E power plant building structures and foundations, as well as surrounding petroleum hydrocarbon-containing soils. The attached document (Q15_2000-09-22.pdf) presents the results of concrete testing conducted during the removal of the stack house foundation and boiler room. In 2001, the City of Portland encountered petroleum hydrocarbons on the western corner of the former Port of Portland Terminal 1 North property. Sulzer Pumps subsequently encountered petroleum hydrocarbons in the southern corner of their property (southern corner of 2700 NW Front Avenue property, which PGE historically owned). In 2002, Geocon Northwest Inc performed a geophysical site investigation; see the attached document (Q15_Geocon NorthWest, Inc. P1210-05-02.pdf). On behalf of PGE, Bridgewater Group Inc in association with Hahn and Associates conducted a voluntary site investigation of Station E East in 2003/2004; see the attached August 2005 Station E Site Investigation report (Q15_2005 Site Investigation - Substation E.pdf). As part of the Station E East site investigation, PGE assessed the extent of contaminants of interest (COIs) within Station E East and along the oil pipeline corridor at the historically PGE-owned 2700 NW Front Avenue property (Sulzer Pumps property). The 2700 NW Front Avenue property is addressed in a separate 104(e) response. During the site investigation, a fourth UST was located at Station E East and sampled in November 2003; see the attached photographs (Q15_2003 UST Photo Log.pdf), which	Q15_1994-09-01.pdf Q15_1994-09-02.pdf Q15_1994-09-09a.pdf Q15_1994-09-09b.pdf Q15_1994-09-15a.pdf Q15_1994-09-15b.pdf Q15_1996-01-23.pdf Q15_1996-03-28.pdf Q15_1996-07-31.pdf Q15_1996-08-07.pdf Q15_1998-01-09.pdf Q15_1999-10-22.pdf Q15_2000-09-22.pdf Q15_2001-1-25a.pdf Q15_2001-1-25b.pdf Q15_2001-05-22.pdf Q15_2002-12-26.pdf Q15_2003-1-3.pdf Q15_2003-2-5.pdf Q15_2003-02-13.pdf Q15_2003-07-01a.pdf Q15_2003-07-01b.pdf Q15_2003-09-04.pdf Q15_2003-9-11.pdf Q15_2004-2-6.pdf Q15_2004-2-6b.pdf Q15_2004-2-11.pdf Q15_2004-08-23.pdf Q15_2004-11-17.pdf Q15_2005-3-2.pdf Q15_2006-9-11.pdf Q15_1993 Technical Specs for USTs.pdf Q15_1994_PCB Air Monitoring Survey.pdf Q15_UST Removal and Remediation 1995.pdf Q15_Geotechnical Report January 2002.pdf Q15_2003 UST Photo Log.pdf Q15_12-08-2003 Norton - SI Work Plan.pdf Q15_2004 HAI Field Notes.pdf Q15_2004 Sulzer TP & Station E Stack Field Notes.pdf Q15_2004 UST Removal Field Notes.pdf Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf Q15_09-27-2004 Gainer - SI WP Addendum-Fig5.pdf Q15_2004 UST Removal Photos.pdf Q15_Geocon NorthWest, Inc. P1210-05-01.pdf

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	document the UST sampling and remediation activities. In early 2004, the UST steel liner and approximately 1,280 tons of surrounding petroleum hydrocarbon-containing soil were removed; see the attached photographs (Q15_2004 UST Removal Photos.pdf), which document the UST removal. The attached August 2005 Station E Site Investigation report (Q15_2005 Site Investigation - Substation E.pdf) includes a discussion/evaluation of the site investigation and UST remediation activities, as well as analytical results from soil and groundwater sampling (located in Appendices B and C). Site investigation field notes are attached (Q15_2004 HAI Field Notes.pdf, Q15_2004 UST Removal Field Notes.pdf, and Q15_2004 Sulzer TP & Station E Stack Field Notes.pdf). Additional data from the site investigation are also provided in the attached documents (Q15_2004-2-6.pdf, Q15_2004-2-6b.pdf, Q15_2004-08-23.pdf, Q15_2004-2-11.pdf, and Q15_2004-11-17.pdf). Data are also provided in the attached Site Investigation Work Plan documents (Q15_12-8-2003 Norton - SI Work Plan.pdf, Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf, and Q15_09-27-2004 Gainer - SI WP Addendum-Fig5.pdf), as well as in the document (Q50_06-07-2006 Gainer.pdf) attached in response to Question 50, which was sent to the Oregon Department of Environmental Quality (DEQ) in response to City of Portland comments on the August 2005 Station E Site Investigation. The August 2005 Station E Site Investigation was reported to the Oregon DEQ and concluded that further evaluation of soil and groundwater was not warranted. On 1 March 2006, the Oregon DEQ sent a Source Control Decision to the United States Environmental Protection Agency (USEPA), which stated that Station E Substation is not a current or reasonably likely future source of contamination to the Willamette River and that no source control measures are required; see the document (Q50_2006-03-01 DEQ Source Control Decision.pdf) attached in response to Question 50. The Oregon DEQ issued PGE a No Further Action determination on 6 December 2006 for Station E East; see the document (Q50_12-06-2006 Norton.pdf) attached in response to Question 50. In 2002, PGE had GeoEngineers Inc perform a geotechnical evaluation for a power pole upgrade at Station E West (just outside of the Station E West security fence along NW Nicolai Street); see the attached report (Q15_Geotechnical Report January 2002.pdf). In 2004, PGE had Geocon Northwest Inc perform a geotechnical evaluation for the installation of a new concrete security wall; see the attached report (Q15_Geocon NorthWest, Inc. P1210-05-01.pdf). Soil/gravel/concrete and water testing have also been conducted, as needed, in conjunction with various improvements/maintenance activities at the Site, as well as in response to spills. See the attached data from various improvements/maintenance activities (Q15_1996-01-23.pdf, Q15_1996-03-28.pdf, Q15_1996-07-31.pdf, Q15_1996-08-07.pdf, Q15_1998-01-09.pdf, Q15_1999-10-22.pdf, Q15_2001-1-25a.pdf, Q15_2001-1-25b.pdf, Q15_2001-05-22.pdf, Q15_2002-12-26.pdf, Q15_2003-1-3.pdf, Q15_2003-2-5.pdf, Q15_2003-02-13.pdf, Q15_2003-07-01a.pdf, Q15_2003-07-01b.pdf, Q15_2003-09-04.pdf, Q15_2003-9-11.pdf, Q15_2005-3-2.pdf, and Q15_2006-9-11.pdf). Also see the spill documents attached in response to Question	Q15_Geocon NorthWest, Inc. P1210-05-02.pdf Q15_2005 Site Investigation - Substation E.pdf Also see Question 19 Attachments Q19_Station E East_SPCC Plan.pdf Q19_Station E West_SPCC Plan.pdf Also see Question 50 Attachments Q50_2006-03-01 DEQ Source Control Decision.pdf Q50_06-07-2006 Gainer.pdf Q50_12-06-2006 Norton.pdf Also see all Question 62 Attachments

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	62. For information regarding the disposal of wastes and materials, see the response to Question 21. The SPCC Plans (Q19_Station E East_SPCC Plan.pdf and Q19_Station E West_SPCC Plan.pdf), attached in response to Question 19, briefly describe topography and soil conditions at Station E Substation.	
16. Identify all past and present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) on each Property. For each such unit or area, provide the following information:	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, there are no past or present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) at the Station E Substation, other than the 4 USTs discussed above in response to Question 13j. From approximately 1905 to 1921, non-contact cooling water (from the Station E power plant condensers) was conveyed to a settling pond within the 2700 NW Front Avenue property (historically owned by PGE). From 1921 until 1953, non-contact cooling water (from the Station E power plant condensers) was conveyed through the 2700 NW Front Avenue property and discharged to the Willamette River. The quantity of non-contact cooling water discharged is not known. For further details, see the response and documents attached for Question 4h and the separate 104(e) response for the 2700 NW Front Avenue property.	See Question 4 Attachments Q04h_1905 Pump House.pdf Q04h_1917 Pump House Plans-a.pdf Q04h_1917 Pump House Plans-b.pdf Q04h_1921 Dock and Pipe to Pump House.pdf Q04h_1936-1980 Pump House Location Aerials.pdf
a. a map showing the unit/area's boundaries and the location of all known units/areas whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the location and size of all past and present units/areas;		
b. dated aerial photograph of the site showing each unit/area;		
c. the type of unit/area (e.g., storage area, landfill, waste pile, etc.), and the dimensions of the unit/area;		
d. the dates that the unit/area was in use;		
e. the purpose and past usage (e.g., storage, spill containment, etc.);		
f. the quantity and types of materials (hazardous substances and any other chemicals) located in each unit/area and;		

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g. the construction (materials, composition), volume, size, dates of cleaning, and condition of each unit/area.		
17. If the unit/area described above is no longer in use, how was such unit/area closed and what actions were taken to prevent or address potential or actual releases of waste constituents from the unit/area.	Not applicable to the Station E Substation.	
18. For each Property, provide the following information regarding any current or former sewer or storm sewer lines or combined sanitary/storm sewer lines, drains, ditches, or tributaries discharging into the Willamette River:		
a. the location and nature of each sewer line, drain, ditch, or tributary;	The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6d and the document (Q07_Sewer Easement 1904.pdf) attached in response to Question 7. To the best of PGE's knowledge, after reasonable inquiry, the Station E Substation does not have and never has had a direct connection to this stormwater line. The SPCC Plans (Q19_Station E East_SPCC Plan.pdf and Q19_Station E West_SPCC Plan.pdf) attached in response to Question 19 incorrectly state on page 1 that "surface runoff is drained from the site by way of municipal storm sewer, which drains directly to the Willamette River." To the best of PGE's knowledge, after reasonable inquiry, stormwater does not, and has not, run off the property. To the best of PGE's knowledge, after reasonable inquiry, prior to 2004/2006 stormwater historically infiltrated through the gravel surface at Station E Substation. Since 2004 when PGE upgraded the stormwater control and secondary spill containment system at Station E East, stormwater falling within the lined containment area at Station E East has been, and is currently, discharged into a pit filled with rocks. Since 2006 when PGE upgraded the stormwater control and secondary spill containment system at Station E West, stormwater falling within the lined containment area at Station E West has been, and is currently, discharged into a system of draining trenches through which it infiltrates into the ground. This error is being corrected in the revised SPCC plans currently under development. To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate any records	See Question 6 Attachments Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf Also see Question 7 Attachment Q07_Sewer Easement 1904.pdf Also see all Question 19 Attachments

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	describing the site's stormwater drainage prior to 1985; however, it is reasonable to assume that stormwater infiltrated through the gravel surface at Station E Substation. In 1985, sand filter trenches were installed around portions of the perimeter of the substation yards as part of the stormwater control and secondary spill containment system at Station E East and Station E West. From 1985 to 2004/2006, site stormwater was drained into the site's sand filter trenches and then infiltrated into the ground. Since 2004 at Station E East and since 2006 at Station E West, site stormwater from within the lined/bermed areas of the stormwater control and secondary spill containment system has been pretreated through the oil spill prevention trenches and/or oil spill containment pits prior to being discharged to a pit filled with rocks (Station E East) or unlined trenches (Station E West). Stormwater outside of the lined areas at Station E East and Station E West infiltrates through the gravel surface covering those portions of the site. Also see the response to Question 13i and the documents attached in response to Question 19. There were floor drains and lavatories located within the Station E power plant building until at least 1975. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if they were connected to the City of Portland's sewer system. The power plant was not used after 1953 and all structures and foundations were removed by 2000. To the best of PGE's knowledge, after reasonable inquiry, there are no operating sanitary or combined sewer lines located within the Station E Substation that service the property.	
b. the date of construction of each sewer line, drain, ditch, or tributary;	The City of Portland retained a sewer easement through Rock Street (part of Parcel B) when the street was vacated and acquired by PGE in 1904; see the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6d and the document (Q07_Sewer Easement 1904.pdf) attached in response to Question 7. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the date of construction for the City of Portland storm line. To the best of PGE's knowledge, after reasonable inquiry, the Station E Substation does not have and never has had a direct connection to this stormwater line. There were floor drains and lavatories located within the Station E power plant building until at least 1975. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if they were connected to the City of Portland's sewer system. The power plant was not used after 1953 and all structures and foundations were removed by 2000.	See Question 6 Attachment Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf Also see Question 7 Attachment Q07_Sewer Easement 1904.pdf
c. whether each sewer line, or drain was ever connected to a main trunk line;	The stormwater line that runs through Station E East is a storm gravity main; see the documents (Q06d_Station E Substation Sewer.pdf and Q06d_Sewer Easement.pdf) attached in response to Question 6. There were floor drains and lavatories located within the Station E power plant building until at least 1975. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if they were connected to the City of Portland's sewer system. The power plant was not used after 1953 and all structures and foundations were removed by 2000. For further details, see the responses to Questions 18a and 13i.	See Question 6 Attachments Q06d_Station E Substation Sewer.pdf Q06d_Sewer Easement.pdf

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d. whether each sewer line, drain, ditch, or tributary drained any hazardous substance, waste, material or other process residue to the Willamette River; and	To the best of PGE's knowledge, after reasonable inquiry no waste, material, or process residue was discharged from Station E Substation to the Willamette River via any sewer lines, drains, ditches, or tributaries. From approximately 1921 until 1953, non-contact cooling water (from the Station E power plant condensers) was conveyed through the 2700 NW Front Avenue property (historically PGE owned) and discharged to the Willamette River. For further details, see the response to Question 4h and the separate 104(e) response for the 2700 NW Front Avenue property.	
e. any documentation regarding but not limited to the following on any and all outfalls to the Willamette River which are located within the boundaries of the Property(ies). Your response should include, but not be limited to: i. the areas serviced by the outfalls; and ii. the type of outfall (i.e., stormwater or single facility operational).	Not applicable. There are no outfalls to the Willamette River that are located within the boundary of Station E Substation. There are two outfalls north of Station E Substation at the location of the former pump house: one that currently serves Sulzer Pumps (Sulzer Pumps Outfall F) and one that serves the City of Portland (96-inch City of Portland storm sewer outfall). One of these outfalls may have been the historical outfall for the non-contact cooling water from the Station E power plant condensers, which discharged to the Willamette River from 1921 until 1953. These outfalls are further addressed in the separate 104(e) response for the 2700 NW Front Avenue property.	
19. Provide copies of any stormwater or property drainage studies, including data from sampling, conducted at these Properties on stormwater, sheet flow, or surface water runoff. Also provide copies of any Stormwater Pollution Prevention, Maintenance Plans or Spill Plans developed for different operations during the Respondent's operation of each Property.	The SPCC plans for Station E East and Station E West (Q19_Station E East_SPCC Plan.pdf and Q19_Station E West_SPCC Plan.pdf), as well as the Oil Containment System figures are attached. The SPCC Plans incorrectly state on page 1 that "surface runoff is drained from the site by way of municipal storm sewer, which drains directly to the Willamette River." To the best of PGE's knowledge, after reasonable inquiry, stormwater does not, and has not, run off the property. To the best of PGE's knowledge, after reasonable inquiry, prior to 2004/2006 stormwater historically infiltrated through the gravel surface at Station E Substation. Since 2004 when PGE upgraded the stormwater control and secondary spill containment system at Station E East, stormwater falling within the lined containment area at Station E East has been, and is currently, discharged into a pit filled with rocks. Since 2006 when PGE upgraded the stormwater control and secondary spill containment system at Station E West, stormwater falling within the lined containment area at Station E West has been, and is currently, discharged into a system of draining trenches through which it infiltrates into the ground. The SPCC Plans at Station E Substation are currently undergoing revision. The attached SPCC Facility Diagrams (Q19_2009_SPCC Facility Diagram East.pdf and Q19_2009_SPCC Facility Diagram West.pdf) show the current oil containment system details. The SPCC plans and associated figures are utilized by PGE to ensure that the Station E Substation has adequate operating procedures that prevent oil spills, control measures installed	Question 19 Attachments Q19_Station E East_SPCC Plan.pdf Q19_Station E West_SPCC Plan.pdf Q19_c29444a1_Oil Containment System.pdf (CEII[1]) Q19_c29444b1_Oil Containment System.pdf Q19_c29444c1_Oil Containment System.pdf Q19_c30658a1_Oil Containment System.pdf (CEII[1]) Q19_c30659a1_Oil Containment System.pdf (CEII[1]) Q19_c30659b1_Oil Containment System.pdf (CEII[1]) Q19_c30659c0_Oil Containment System.pdf Q19_d10076a4_Oil Containment System.pdf Q19_d10117a0_Oil Containment System.pdf Q19_2009_SPCC Facility Diagram East.pdf (CEII[1]) Q19_2009_SPCC Facility Diagram West.pdf (CEII[1]) Q19_Environmental Services Oil Spill Instruction.pdf Q19_Oil Spill Cleanup Procedures.pdf Q19_Oil Spill Response Team.pdf Q19_Oil Spill First Response.pdf

[1] Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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	to prevent a spill from reaching navigable waters, and countermeasures to contain, clean up, and mitigate the effects of any oil spill that might reach navigable waters. The oil containment system, which includes the stormwater control and secondary containment system, captures and contains oil from power equipment in case of leaks or failures. The stormwater control and secondary containment system is discussed in more detail in the response to Question 13i. General PGE spill clean up procedures are described in the attached documents (Q19_Environmental Services Oil Spill Instruction.pdf, Q19_Oil Spill Cleanup Procedures.pdf, Q19_Oil Spill Response Team.pdf, and Q19_Oil Spill First Response.pdf). To the best of PGE's knowledge, after reasonable inquiry, other than evaluation for SPCC requirements, no drainage studies have been performed at the Station E Substation.	
Section 4.0 - Respondent's Operational Activities		
20. Describe the nature of your operation or business activities at each Property. If the operation or business activity changed over time, please identify each separate operation or activity, the dates when each operation or activity was started and, if applicable, ceased.	See the response to Question 5g for a description of the activities/operations performed at Station E Substation. PGE generated electricity at the Station C steam plant from 1901 to 1907 and at the Station E power plant from 1905 to 1953. PGE manned the substation from at least 1913 to 1957 and has had unmanned operations at the substation from 1957 to present. The purpose of the substation is to provide continuous electrical power to customers while protecting the public and equipment from electrical and mechanical faults. See the response for Questions 13k for a discussion of major modifications at the Station E Substation.	
21. At each Property, did you ever use, purchase, generate, store, treat, dispose, or otherwise handle any waste, or material? If the answer to the preceding question is anything but an unqualified "no," identify:		
a. in general terms, the nature and quantity of the waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;	Waste and materials have been handled at Station E Substation in conjunction with various operations, construction projects, and spills. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the handling of waste and materials at Station E Substation. <u>Historical Station C Steam Plant</u> The Station C steam plant generated power from 1901 until 1907. Power was generated by burning wood waste (solid). The plant was decommissioned in 1912/1913. The primary materials that may have been used for equipment maintenance include transformer oil (liquid), solvents (liquid), denatured alcohol (liquid), degreasers (liquid), lubricating grease (semi-liquid), hydraulic fluid (liquid), and paint (liquid). Please note, the Station C steam plant ceased operations prior to the generalized marketing of PCBs in the United States.	Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21a_1986-11-07_Oil Filled Equipment.pdf Q21a_2009_Oil Filled Equipment.pdf Q21a_1994-06-01_HazWaste Manifest 01407.pdf Q21a_1994-08-16_HazWaste Manifest 01446.pdf Q21a_1994-08-25_HazWaste Manifest 01408.pdf Q21a_1994-08-30_HazWaste Manifest 01409.pdf Q21a_1994-08-30_HazWaste Manifest 01410.pdf Q21a_1994-08-31_HazWaste Manifest 01411.pdf Q21a_1994-08-31_HazWaste Manifest 01412.pdf

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	Historical Station E Power Plant The Station E power plant generated power from 1905 until 1953. Power was initially generated by burning oil (liquid) and wood waste (solid). The plant was converted to a coal-fired (solid) unit during World War I, and was converted back to an oil-fired unit after World War I. Wood waste was purchased from the Eastern & Western Lumber Company and was stored in the stock house located northeast of the Station E power plant buildings. To the best of PGE's knowledge, after reasonable inquiry, there were four USTs (560-, 1,520-, and two 2,140-barrel) that historically stored fuel oil (liquid) (e.g., bunker fuel) associated with the historical Station E power plant. The primary materials that may have been used for equipment maintenance include transformer oil (liquid), solvents (liquid), denatured alcohol (liquid), degreasers (liquid), lubricating grease (semi-liquid), hydraulic fluid (liquid), and paint (liquid). PGE was unable to locate further information concerning the quantity of wood/coal/oil or other materials used on site. In 1953, the Station E power plant was placed on "cold stand-by service" and, after being idle for 15 years, the power plant was retired in 1968. The eastern half of the Station E power plant building (solid) was razed and disposed of in 1977. From 1905 to approximately 1921, non-contact cooling water (liquid) from the Station E power plant condensers was conveyed and discharged to a settling pond approximately 30 ft within the 2700 NW Front Avenue property. From 1921 to 1953, the non-contact cooling water was conveyed from the Station E power plant condensers, through the 2700 NW Front Avenue property, and discharged to the Willamette River. The quantity of non-contact cooling water discharged is not known. The 2700 NW Front Avenue property is addressed in a separate 104(e) response. Substation Operations and Recent Site Remedial Activities Most of the functions in a substation are automatic and occur without direct supervision. No wastes, including municipal wastes, are generated during regular operations. Periodically, equipment is taken out of service for maintenance. During these periods, waste material is generated. The primary materials used for maintenance include transformer oil (liquid), solvents (liquid), denatured alcohol (liquid), degreasers (liquid), lubricating grease (semi-liquid), hydraulic fluid (liquid), and paint (liquid). The products/materials currently used at PGE properties within Oregon and potentially used at the Station E Substation are listed in the attached document (Q33_08 EMC List.pdf). Material Safety Data Sheets (MSDS) for these products/materials are provided in a supplemental submittal (Supplemental Submittal S2). Products/materials used in the past are similar to those used currently. In 1993, PGE commenced enlarging and upgrading the Station E Substation. As part of the enlargement and upgrading, PGE assessed the contents of three previously decommissioned USTs (560-, 1,520-, and 2,140-barrel) at Station E East. Based upon the assessment, PGE decided to remove the USTs (solid) and remediate (remove) approximately 5,145 tons of the surrounding petroleum hydrocarbon-containing soil (solid) in 1993/1994; see the document (Q62_12-28-1993_Oil Spill Questionaire.pdf) attached in response to Question 62, which documents the initial discovery that the contents of the USTs had leaked into surrounding soil.	Q21a_1994-09-08_HazWaste Manifest 01451.pdf Q21a_1994-09-09_HazWaste Manifest 01452.pdf Q21a_1994-09-14_HazWaste Manifest 01453.pdf Q21a_1994-09-21_HazWaste Manifest 01454.pdf Q21a_1994 TPS Soil Recycling Cert.pdf Q21a_2004-10-04_HazWaste Manifest.pdf Q21a_1986-12-10_Transport of Capacitors.pdf Q21a_1988-08-23_Transport of Capacitors.pdf Q21a_1999-11-23.pdf Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Q21a_Station E East_WAL_02-2004.pdf Q21a_Station E East_WAL_09-12-2003.pdf Q21a_2004 Hillsboro Landfill Tickets.pdf Q21a_2004 Concrete.pdf Q21a_Station E East_WAL_11-29-2004.pdf Q21a_Station E_NH WAL_09-30-2003.pdf Q21a_Station E_NH WAL_05-22-2003.pdf Q21a_Station E West_WAL_11-16-2006.pdf Also see all Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf Also see Question 33 Attachment Q33_08 EMC List.pdf Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf Also see Question 50 Attachments Q50_2006-03-01 DEQ Source Control Decision.pdf Q50_12-06-2006 Norton.pdf Also see all Question 52 Attachments Also see all Question 62 Attachments

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	The February 1995 UST Removal and Remediation (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15, summarizes the assessment and remediation. The approximately 30,000 gallons of oily water (liquid) from the 2,140-barrel UST was sent to Sunwest Energy Inc, the approximately 140 tons of petroleum hydrocarbon-containing solidified content (solid) of the 2,140-barrel UST was sent to Columbia Ridge Landfill, the 64,200 lbs of UST steel (solid) not covered in oil was sent to Schnitzer Steel, the UST steel (solid) covered in oil was sent to Hillsboro Landfill, and the approximately 2,000 gallons of petroleum hydrocarbon-containing solidified contents (solid) from the 1,520-barrel and 560-barrel USTs and the approximately 5,145 tons of petroleum hydrocarbon-containing soil were sent to Oregon Hydrocarbon/TPS Technologies. See Appendices D and E of the February 1995 UST Removal and Remediation (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, as well as the attached TPS certificate of soil recycling (Q21a_1994 TPS Soil Recycling Cert.pdf). During the enlarging and upgrading of Station E Substation, PGE also characterized the soil/gravel and concrete at Station E East and Station E West for potential PCB contamination. The characterization of the soil identified locations of PCB contamination. In 1994, PGE remediated (removed) and disposed of approximately 170,000 kg (18.7 tons) of petroleum hydrocarbon- and PCB-containing soil/gravel (solid) from Station E East and Station E West at the Arlington Landfill; see the attached hazardous waste manifests (Q21a_1994-06-01_HazWaste Manifest 01407.pdf, Q21a_1994-08-25_HazWaste Manifest 01408.pdf, Q21a_1994-08-30_HazWaste Manifest 01409.pdf, Q21a_1994-08-30_HazWaste Manifest 01410.pdf, Q21a_1994-08-31_HazWaste Manifest 01411.pdf, Q21a_1994-08-31_HazWaste Manifest 01412.pdf, Q21a_1994-09-08_HazWaste Manifest 01451.pdf, Q21a_1994-09-09_HazWaste Manifest 01452.pdf, Q21a_1994-09-14_HazWaste Manifest 01453.pdf, and Q21a_1994-09-21_HazWaste Manifest 01454.pdf). In 1999/2000, PGE removed the remaining Station E power plant building structures and foundations (solid), as well as surrounding petroleum hydrocarbon-containing soils (solid). In preparation for the building demolition, the building was sand-blasted to remove lead-based paint. In February 2000, the lead-based paint waste (paint chips, soil, personal protective equipment, and filters) was disposed of at the Arlington Landfill; see the attached documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf, Q21a_HazWasteManifest_Station E_2000.pdf, and Q21a_DEQ Hazardous Waste Site Report.pdf). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q52_09.pdf) attached in response to Question 52, the approximately 1,500 cubic yards of petroleum hydrocarbon-containing soil and demolition debris were likely disposed at the Hillsboro Landfill. In 2003, PGE (via its consultants Bridgewater Group Inc and Hahn and Associates Inc) conducted a voluntary site investigation of Station E East; see the August 2005 Station E Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. During the site investigation, a fourth UST (2,140-barrel) was located at Station E East. In early 2004, the fourth UST's steel liner (solid), UST contents (liquid and solid), and approximately 1,280 tons of surrounding petroleum hydrocarbon-containing soils (solid) were	

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	removed. The steel liner was sent to Schnitzer Steel; the UST contents (approximately 8,850 gallons of oil water, 6,900 gallons of oil, and 10 drums of solids) were sent to Emerald Services; a small quantity of water (liquid) from rain during the excavation of the petroleum hydrocarbon-containing soil was sent to Portland Service Center (PSC) for disposal with vault water from other PGE properties; and the approximately 1,280 tons of petroleum hydrocarbon soil was sent to Hillsboro Landfill. See the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15, particularly Appendices G and H. Also see the attached documents (Q21a_Station E East_WAL_02-2004.pdf, Q21a_Station E East_WAL_09-12-2003.pdf, Q21a_2004 Hillsboro Landfill Tickets.pdf, and Q21a_2004 Concrete.pdf). The August 2005 Station E Site Investigation report concluded that further evaluation of soil and groundwater was not warranted. The report was sent to Oregon DEQ. On 1 March 2006, the Oregon DEQ sent a Source Control Decision to the USEPA, which stated that Station E Substation is not a current or reasonably likely future source of contamination to the Willamette River and that no source control measures are required; see the document (Q50_2006-03-01 DEQ Source Control Decision.pdf) attached in response to Question 50. The Oregon DEQ issued PGE a No Further Action determination on 6 December 2006 for Station E East; see the document (Q50_12-06-2006 Norton.pdf) attached in response to Question 50. Soil (solid) and gravel (solid) removed from PGE properties during site excavations (from site upgrades, construction, or equipment spill response) are tested (for petroleum-hydrocarbon and/or PCB contamination) and disposed of appropriately, as needed. See the attached 2006 non-hazardous waste approval letter (Q21a_Station E West_WAL_11-16-2006.pdf) from site construction, as well as the disposal permits attached in response to Question 52. To the best of PGE's knowledge, after reasonable inquiry, the following releases have occurred at the Station E Substation (other than the remediation activities already discussed, above): • May 8, 1987 – Approximately 1 gallon of PCB-containing (75 ppm) regulator oil (liquid) spilled on the soil/gravel (solid) behind the 8-foot fence within Station E East; see the document (Q62_05-08-1987_Oil Spill Questionaire.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. To the best of PGE's knowledge, after reasonable inquiry, the PCB- and petroleum hydrocarbon-containing soil and gravel were likely disposed of at the Arlington Landfill after interim storage at a PGE waste and used materials handling facility. • May 20, 2003 – Approximately 1 gallon of hydraulic oil (liquid) from a trackhoe spilled on the gravel (solid) within Station E East; see the document (Q62_05-20-2003_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 25 square feet of petroleum hydrocarbon-containing gravel were disposed at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the attached	

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	document (Q21a_Station E_NH WAL_05-22-2003.pdf). • August 28, 2003 – Approximately 2 gallons of hydraulic oil (liquid) from a PGE truck were spilled on the gravel (solid) within Station E West; see the document (Q62_08-28-2003_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 300 square feet of petroleum hydrocarbon-containing gravel were disposed at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the attached document (Q21a_Station E_NH WAL_09-30-2003.pdf). • November 16, 2004 – Approximately 0.5 gallons of diesel fuel (liquid) from a Bobcat (mini-hoe truck) spilled on the soil/gravel (solid) within Station E West during construction activities; see the document (Q62_11-16-2004_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 9 square feet of petroleum hydrocarbon-containing soil and gravel (with <0.2 ppm PCBs) were disposed at Hillsboro Landfill; see the attached document (Q21a_Station E East_WAL_11-29-2004.pdf). See the attached document (Q21a_2009_Oil Filled Equipment.pdf) for the list of oil-filled substation equipment currently at Station E East and Station E West (as of 2008). The document identifies the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. Several pieces of the oil-filled equipment listed in the attached document (Q21a_2009_Oil Filled Equipment.pdf) are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the attached document (Q21a_1986-11-07_Oil Filled Equipment.pdf) for the list of oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Other oil-filled equipment transportation, disposal, and testing documents include: • The attached document (Q21a_1986-12-10_Transport of Capacitors.pdf) provides the general transport documents for non-leaking capacitors (oil-filled [liquid] capacitors [solid]) removed from the Station E Substation in 1986. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). • The attached document (Q21a_1988-08-23_Transport of Capacitors.pdf) is the general transport document for a failed PCB-containing capacitor removed from the Station E Substation in 1988. This capacitor was picked up for disposal/recycling by ENSCO (now Clean Harbors)	

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	• In 1994, the majority of PCB-containing capacitors at Station E (solid, liquid filled) were changed out with non-PCB-containing capacitors (< 1 ppm PCBs). The Toxic Substances Control Act (TSCA) regulation standard and accepted industry standard is to use the term "non-PCB" to describe oils with < 50 ppm PCBs; this term is used throughout this document. The PCB-containing capacitors were transferred to PSC for interim storage. In August 1994, the PCB-containing capacitors (five drums and nine pallets, a total of 240 capacitors) were incinerated at Rollins Environmental Services Inc at Deer Park; see the attached document (Q21a_1994-08-16_HazWaste Manifest 01446.pdf). • The attached document (Q21a_1999-11-23.pdf) provides the PCB analytical results for the transformer oil in four transformers at Station E Substation in 1999. The PCB results were non-detect for all four transformers. • Sometime between 2003 and 2004, the PCB-containing oil was drained out of the large PCB-containing transformer (Transformer 10474) at Station E West and replaced with non-PCB-containing oil. The removed PCB-containing oil was pumped into portable tanker trailers and transferred to PSC for interim storage. In October 2004, the PCB-containing transformer oil was transported to an Onyx Special Services Inc facility prior to incineration at a TSCA licensed incinerator; see the document (Q21a_2004-10-04_HazWaste Manifest.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry, those companies/persons with whom PGE currently has arrangements for disposal/recycling/destruction of wastes and/or used material are listed in the attached document (Q21a_Waste Stream Summary.pdf). The document summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal/recycling facility. To the best of PGE's knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. Also see the response and documents for Questions 15, 21c, 21d, 52, and 62.	
b. the chemical composition, characteristics, physical state (e.g.. solid. liquid) of each waste or material so transported, used, purchased, generated, stored. treated, disposed, or otherwise handled;	See the response to Question 21a, which includes the information concerning chemical composition, characteristics, and physical state of each waste or material.	
c. how each such waste or material was used, purchased, generated, stored, treated, transported, disposed or	<u>Historical Station C Steam Plant and Station E Power Plant</u> Wood waste was used for steam generation at the Station C steam plant from 1901 to 1907. Wood waste, coal, and oil were used for power generation at the Station E power plant from 1905 to 1953. Wood waste was stored in the stock building, northeast of the Station E power	Question 21 Attachments Q21a_1986-12-10_Transport of Capacitors.pdf Q21a_1988-08-23_Transport of Capacitors.pdf Q21a_1994 TPS Soil Recycling Cert.pdf

EPA Question	Response	Records/Information Available
otherwise handled by you; and	plant buildings. Oil was stored on site in the four USTs (560-, 1,520-, and two 2,140-barrel). The primary materials that may have been used for equipment maintenance include transformer oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid and paint; these materials were likely stored on site during the historical Station C steam plant and Station E power plant operations. For further information, see the response to Question 21a. <u>Substation Operations and Recent Site Remedial Activities</u> Currently, no waste or materials are stored on site. In the past, wastes and used materials from within the Investigation Area were transported either directly to the appropriate disposal facility or to one of PGE's waste and used materials handling facilities at Harborton Substation (located at 12500 NW Marina Way, Portland, OR), Sellwood Substation (located at 8856 SE 13TH AVE), PSC (located at 3700 SE 17th Ave, Portland, Oregon), or Wilsonville (located at 9480 SW Boeckman Rd, Wilsonville, Oregon - only soil/gravel with < 50 ppm PCBs) for interim storage prior to disposal/recycling/destruction. Currently, wastes and used materials not transported directly to the appropriate disposal facility are transferred to the current waste and used materials handling facilities (PSC and Wilsonville [only soil/gravel with < 50 ppm PCBs]) for interim storage prior to disposal/recycling/destruction. Materials potentially contaminated with PCBs are sealed in barrels and transferred to PGE's waste and used materials handling facility (currently at PSC). Once received at the waste and used materials handling facility, these wastes are tested to determine a disposal location appropriate for their PCB concentration or are assumed to contain PCBs. These wastes include: • Used/excess lubricants, oils, and other fluids • Obsolete equipment (e.g., transformers, capacitors) • Rags used to clean equipment • Absorbent material used to clean up leaks or spills • Ballasts Wastes not contaminated with PCBs (< 50 ppm) are containerized separately and transferred to PGE's waste and used materials handling facility (currently at PSC). These include: • Solvents • Batteries • Scrap metal • Light bulbs • General garbage and recycling • Obsolete equipment (e.g., transformers, capacitors, ballasts) Soil and gravel removed during excavations (from upgrades, spill response, or remediation) are tested and disposed of appropriately. The soil and gravel are either transported directly from the site to the disposal facility, or are transported to Wilsonville and/or PSC for interim storage before bulk disposal at a location dependant upon PCB content.	Q21a_1994-06-01_HazWaste Manifest 01407.pdf Q21a_1994-08-16_HazWaste Manifest 01446.pdf Q21a_1994-08-25_HazWaste Manifest 01408.pdf Q21a_1994-08-30_HazWaste Manifest 01409.pdf Q21a_1994-08-30_HazWaste Manifest 01410.pdf Q21a_1994-08-31_HazWaste Manifest 01411.pdf Q21a_1994-08-31_HazWaste Manifest 01412.pdf Q21a_1994-09-08_HazWaste Manifest 01451.pdf Q21a_1994-09-09_HazWaste Manifest 01452.pdf Q21a_1994-09-14_HazWaste Manifest 01453.pdf Q21a_1994-09-21_HazWaste Manifest 01454.pdf Q21a_2004-10-04_HazWaste Manifest.pdf Q21a_1999-11-23.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_Station E East_WAL_09-12-2003.pdf Q21a_Station E East_WAL_02-2004.pdf Q21a_2004 Hillsboro Landfill Tickets.pdf Q21a_2004 Concrete.pdf Q21a_Station E West_WAL_11-16-2006.pdf Q21a_Station E East_WAL_11-29-2004.pdf Q21a_Station E_NH WAL_09-30-2003.pdf Q21a_Station E_NH WAL_05-22-2003.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf Q21c_HID and Fluorescent Tube Storage Instructions 2006.pdf Q21c_PGE Aerosol Can Disposal Flowchart 2006.pdf Q21c_PGE Battery Flow Chart 2007.pdf Q21c_PGE Bulb & Tube Recycling Flowchart 2006.pdf Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf Also see all Question 52 Attachments Also see all Question 62 Attachments

EPA Question	Response	Records/Information Available
	For how the known remediation wastes (1994, 1999/2000, and 2003/2004) were handled by PGE, see the response and documents attached for Question 21a and reports (Q15_UST Removal and Remediation 1995.pdf and Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. In 1994, the majority of PCB-containing capacitors were changed out with non-PCB-containing capacitors (< 1 ppm PCBs). The PCB-containing capacitors were transferred to PSC for interim storage. In August 1994, the PCB-containing capacitors (five drums and nine pallets, a total of 240 capacitors) were incinerated at Rollins Environmental Services Inc at Deer Park; see the attached document (Q21a_1994-08-16_HazWaste Manifest 01446.pdf) attached in response to Question 21a. Sometime between 2003 and 2004, the PCB-containing oil was drained out of the large PCB-containing transformer (Transformer 10474) at Station E West and replaced with non-PCB-containing oil. The removed PCB-containing oil was pumped into portable tanker trailers and transferred to PSC for interim storage. In October 2004, the PCB-containing transformer oil was transported to an Onyx Special Services Inc facility prior to incineration at a TSCA licensed incinerator; see the document (Q21a_2004-10-04_HazWaste Manifest.pdf) attached in response to Question 21a. See the document (Q21a_2009_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment currently at Station E East and Station E West (as of 2008). Also see the document (Q21a_1986-11-07_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Also see the response and documents attached for Question 21a for how the obsolete capacitors were handled by PGE. See the attached documents (Q21c_Cleaning Up Small Mercury Spills 2008.pdf, Q21c_HID and Fluorescent Tube Storage Instructions 2006.pdf, Q21c_PGE Aerosol Can Disposal Flowchart 2006.pdf, Q21c_PGE Battery Flow Chart 2007.pdf, and Q21c_PGE Bulb & Tube Recycling Flowchart 2006.pdf) for descriptions of PGE's waste and used materials handling procedures. The attached mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at Station E Substation. Also see the response and documents for Questions 15, 21a, 21d, 52, and 62. The Harborton Substation, which was historically a PGE waste and used materials handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7).	
d. the quantity of each such waste or material used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you.	<u>Historical Station C Steam Plant and Station E Power Plant</u> Wood waste was used for steam generation at the Station C steam plant from 1901 to 1907. Wood waste, coal, and oil were used for power generation at the Station E power plant from 1905 to 1953. Wood waste was stored in the stock building, northeast of the Station E power plant buildings. Oil was stored on site in the four USTs (560-, 1,520-, and two 2,140-barrel). The primary materials that may have been used for equipment maintenance include transformer	See all Question 21 Attachments Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf

EPA Question	Response	Records/Information Available
	oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid and paint; these materials were likely stored on site during the historical Station C steam plant and Station E power plant operations. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information or knowledge concerning the quantity of wood/coal/oil or other materials purchased, transported, stored, and used on site during the historical Station C steam plant and Station E power plant operations. See the response to Questions 21a and 21c. <u>Substation Operations and Recent Site Remedial Activities</u> Waste was generated during substation operations associated with equipment maintenance and upgrades. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information on the exact quantities of oil or routine maintenance waste removed from the Station E Substation. Soil and gravel removed during excavations (from upgrades or equipment spill response) are tested and disposed of appropriately. The soil and gravel are either transported directly from the site to the disposal facility, or are transported to Wilsonville and/or PSC for interim storage before bulk disposal at a location dependant upon PCB content. See the response to Question 21a for the quantity of the known remediation wastes handled by PGE. See the document (Q21a_2009_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment currently at Station E East and Station E West (as of 2008). Also see the document (Q21a_1986-11-07_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Also see the response and documents attached for Question 21a for how the obsolete capacitors were handled by PGE. See the response and documents for Questions 15, 21a, 21c, 52, and 62. Also see the waste and materials documentation provided in the separate 104(e) response for Harborton Substation, which was historically a waste and used materials handling facility and is within the Investigation Area, and the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7).	Also see all Question 52 Attachments Also see all Question 62 Attachments
22. Describe all activities at each Property that was conducted over, on, or adjacent to, the Willamette River. Include in your description whether the activity involved hazardous substances, waste(s), or materials and whether any such hazardous substances, waste(s), or materials were discharged, spilled, disposed of, dropped, or otherwise came	Not applicable to the Station E Substation. The Station E Substation is not adjacent to the Willamette River. For the PGE operations related to the historical pump house and associated pipelines, see the response to Question 4h and the separate PGE 104(e) response for the 2700 NW Front Avenue property.	

EPA Question	Response	Records/Information Available
to be located in the Willamette River.		
23. For each Property at which there was or is a mooring facility, dock, wharf or any over-water structure, provide a summary of over-water activities conducted at the structure, including but not limited to, any material loading and unloading operations associated with vessels, materials handling and storage practices, ship berthing and anchoring, ship fueling, and ship building, retrofitting, maintenance, and repair.	Not applicable to the Station E Substation. See the response to Question 22.	
24. Describe all activities conducted on leased aquatic lands at each Property. Include in your description whether the activity involved hazardous substances, waste, or materials and whether any such hazardous substances, waste, or materials were discharged, spilled, disposed of, dropped, or otherwise came to be located on such leased aquatic lands.	Not applicable to the Station E Substation. See the response to Question 22.	
25. Please describe the years of use, purpose, quantity, and duration of any application of pesticides or herbicides on each Property during the period of investigation (1937 to the present). Provide the brand name of all pesticides or herbicides used.	Several herbicides have been used at Station E East and Station E West to control vegetation growth. From 1992 through 2007, one or more herbicides (i.e., Oust, Diuron, Princep, Pendulum, Landmark, Portfolio, and/or Garlon4) were used at Station E East and Station E West. To the best of PGE's knowledge, after reasonable inquiry, the following are the quantities applied (when applied): • Oust – 2-4 oz per acre • Diuron – 5-6 lbs per acre • Princep – 5 lbs per acre • Pendulum – 5 lbs per acre • Landmark – 4.5 oz per acre • Portfolio – 4 oz per acre • Garlon4 – as needed for spot brush control (only at Station E East)	Question 25 Attachments Q25_Station E West - Herb Application History.pdf Q25_Station E East - Herb Application History.pdf

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	See the attached documents for further details on the known herbicide application history.	
26. Describe how wastes transported off the Property for disposal are and ever were handled, stored, and/or treated prior to transport to the disposal facility.	Historically, wood waste, coal, and oil, which were used for power generation at the Station C steam plant (wood waste only) and Station E power plant, were stored on site; see the response to Question 21 for further details. The primary materials that may have been used for equipment maintenance include transformer oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid and paint; these materials were likely stored on site during Station E power plant operations (1905-1953) but are not currently stored on site for substation operations. Currently, no waste or materials are stored on site. Wastes and used materials from within the Investigation Area are either transported directly to the appropriate disposal facility or transported to a PGE waste and used materials handling facility for interim storage prior to disposal/recycling/destruction. Historically, PGE's waste and used materials handling facilities were Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, PGE's waste and used materials handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs). For further waste information, see the response and documents for Question 21.	See all Question 21 Attachments
27. Has Respondent ever arranged for disposal or treatment or arranged for transportation for disposal or treatment of materials to any Property (including the Willamette River) within the Investigation Area? If so, please identify every Property that Respondent's materials were disposed or treated at in the Investigation Area. In addition, identify:	To the best of PGE's knowledge, after reasonable inquiry, waste and materials were not disposed at Station E Substation. To the best of PGE's knowledge, after reasonable inquiry, no wastes were disposed into the Willamette River.	
a. the persons with whom the Respondent made such arrangements;	To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the quantity of, nature of, date(s) of disposal, or location where waste was disposed or recycled during the historical power plants operations. The Station C steam plant operated from 1901 to 1907 and was decommissioned/razed in 1912/1913. The Station E power plant operated from 1905 to 1953. The eastern half of the Station E power plant building was razed and disposed of in 1977. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information on the quantity or disposal location for the 1912/1913 and 1977 building demolition debris. In general, waste and used material from within the Investigation Area are either transported directly to the appropriate disposal facility or transported to a PGE waste and used materials handling facility for interim storage prior to disposal/recycling/destruction. Historically, PGE's waste and used materials handling facilities were Harborton Substation, Sellwood Substation,	Question 27 Attachment Q27_Waste-Materials Receivers within IA.pdf Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf

EPA Question	Response	Records/Information Available
	PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, PGE's waste and used materials handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs). The Harborton Substation is within the Investigation Area and is addressed in a separate 104(e) response. To the best of PGE's knowledge, after reasonable inquiry, companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. To the best of PGE's knowledge, after reasonable inquiry, those companies currently used are listed in the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. Of those listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40, those companies within the Investigation Area are summarized in the attached document (Q27_Waste-Materials Receivers within IA.pdf) and include the following: • Acme Trading & Supply – located at 4927 NW Front Ave, Portland, OR • AGG Enterprises Inc. – located at 5555 N Channel Ave. #3, Portland, OR • Ash Grove Cement Company – located at 13939 N Rivergate Blvd, Portland, OR • Bingham Willamette (now Sulzer Pumps) – located at 2800 NW Front Ave, Portland, OR • Calbag Metals – located at 2495 NW Nicolai St and 12005 N Burgard Way, Portland, OR • Cascade General Inc – located at 5555 N Channel Rd, Portland, OR • General Electric Company – located at 2535 NW 28th Ave, Portland, OR • Northwest Natural Gas Co – located at 123 NW Flanders, Portland, OR • Nudleman & Sons – located at 2707 NW Nela, Portland, OR • **Oregon Hydrocarbon/TPS Technologies** – located at 9333 N Harborgate St, Portland, OR • Port of Portland – located at 121 NW Everett Street, Portland, OR • **Schnitzer Steel** – located at 3200 NW Yeon Ave and 12005 N Burgard Way, Portland, OR • Tyee Construction Company of Oregon – located at 12005 Burgard Way, Portland, OR • Univar – located at 3950 NW Yeon Ave and 10821 N Lombard St, Portland, OR • Western Steel Cast – located at 3070 SW Moody, Portland, OR To the best of PGE's knowledge, after reasonable inquiry, those companies listed above in **bold** have been identified as having directly received waste from Station E Substation based on the response and documents attached in response to Question 21. The other (non-bold) companies/persons listed above have historically received or currently receive waste and/or used materials from the PGE waste and used materials handling facilities, which may have included waste and/or used materials from Station E Substation. General Electric Company was used as a transformer transfer facility by PGE. It is unknown whether any Station E Substation equipment went through this facility. The Harborton Substation, a historical PGE waste and used materials handling facility, is within the Investigation Area and is addressed in a separate	

EPA Question	Response	Records/Information Available
	104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7).	
b. every date on which Respondent made such arrangements;	To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the quantity of, nature of, date(s) of disposal, or location where waste was disposed or recycled during the historical power plants operations. The Station C steam plant operated from 1901 to 1907 and was decommissioned/razed in 1912/1913. The Station E power plant operated from 1905 to 1953. The eastern half of the Station E power plant building was razed and disposed in 1977. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information on the quantity or disposal location for the 1912/1913 and 1977 building demolition debris. Of the companies positively identified by PGE as having directly received waste or used material from Station E Substation (listed in **bold** in response to Question 27a), the following summarizes the dates on which the arrangements were made: • **Oregon Hydrocarbon/TPS Technologies** – February and May 1994 for the petroleum hydrocarbon-containing soil. May 1993 and January 1994 for the solidified contents of the 1,520-barrel and 560-barrel USTs. See pages 4-2 and 4-3 and Appendices D and E of the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15. • **Schnitzer Steel** – January to May 1994 for the steel not covered in oil from the three USTs; see page 6-1 of the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15. February or March 2004 for the 2,140-barrel UST steel liner; see page 32 of the August 2005 Site Investigation report (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for these specific facilities are provided with the documents (Q15_UST Removal and Remediation 1995.pdf and Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).	See Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf
c. the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid) and quantity (volume and weight) of all materials involved in	To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the quantity of, nature of, date(s) of disposal, or location where waste was disposed or recycled during the historical power plants operations. The Station C steam plant operated from 1901 to 1907 and was decommissioned/razed in 1912/1913. The Station E power plant operated from 1905 to 1953. The eastern half of the Station E power plant building was razed and disposed in 1977.	See Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf Also see Question 21 Attachment

EPA Question	Response	Records/Information Available
each such arrangement;	To the best of PGE's knowledge, after reasonable inquiry, PGE has no information on the quantity or disposal location for the 1912/1913 and 1977 building demolition debris. Historically, used oil and maintenance waste (including petroleum hydrocarbon and/or PCB containing waste) were transported to Harborton Substation, Sellwood Substation, or PSC for interim storage prior to disposal or recycling. Currently, used oil and maintenance waste are transported to PSC for interim storage prior to disposal or recycling. The amount of waste generated during substation operations associated with equipment maintenance varied between substations/properties. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the quantities/characteristics of oil or routine maintenance waste removed from the substations/properties. The Harborton Substation is within the Investigation Area and is discussed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7). To the best of PGE's knowledge, after reasonable inquiry, disposal/recycling facilities with which PGE has made arrangements for disposal/recycling of wastes for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. The document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal/recycling facility. Of those listed, the following is a description of the waste and used materials disposed/recycled at facilities within the Investigation Area: • Acme Trading & Supply – Used (but not obsolete) transformers (solid) and ballasts (solid) • AGG Enterprises Inc. – Mixed non-hazardous waste (various) and recyclables • Ash Grove Cement Company – Non-PCB waste: oil (liquid) with PCBs < 50 ppm • Bingham Willamette (now Sulzer Pumps) – Used (but not obsolete) transformers (solid) and oil circuit breakers (solid) • Calbag Metals – Scrap metal (solid) and empty aerosol cans (solid) • Cascade General Inc – Non-hazardous liquid waste/material: mineral oil (liquid) with PCBs < 50 ppm • General Electric Company – Oil with PCBs ≥ 50 ppm (liquid), obsolete equipment (solid) with trace levels of PCBS ≥ 50 ppm, and used (but not obsolete) transformers (solid) • Northwest Natural Gas Co – Transformer oil (liquid) • Nudleman & Sons – Scrap copper (solid) • **Oregon Hydrocarbon/TPS Technologies** – Solidified contents of USTs (solid) and petroleum hydrocarbon-containing soil (solid) • Port of Portland – Used (but not obsolete) transformers (solid) and ballasts (solid) • **Schnitzer Steel** – Scrap metal (solid) and empty aerosol cans (solid) • Tyee Construction Company of Oregon – Transformers (solid) • Univar – Used transformer/insulating oil (liquid, <1 ppm PCBs), used rags/absorbent	Q21a_Waste Stream Summary.pdf Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf

EPA Question	Response	Records/Information Available
	material from leaks or spills (solid, ≥50 ppm PCBs), and used transformer/insulating oil (liquid, ≥ 50 ppm PCBs) • Western Steel Cast – Transformers (solid) To the best of PGE's knowledge, after reasonable inquiry, those companies listed above in **bold** have been identified as having received waste from Station E Substation based on the response to Questions 15 and 21 and the documents (Q15_UST Removal and Remediation 1995.pdf and Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. The following summarizes the waste generated during the 1993/1994 and 2004 remedial activities and sent to facilities within the Investigation Area: <u>1994/1995 Activities</u> • 64,200 lbs of UST steel (solid, metal) sent to Schnitzer Steel, Portland OR • 1,520-barrel and 560-barrel solidified contents, approximately 2,000 gallons of oil and water (solid, petroleum hydrocarbon-containing), sent to Oregon Hydrocarbon/TPS Technologies • 5,145 tons of petroleum hydrocarbon-containing soil (solid, petroleum-hydrocarbon-containing) sent to Oregon Hydrocarbon/TPS Technologies <u>2004 Activities</u> • 2,140-barrel UST steel liner (solid, metal) sent to Schnitzer Steel, Portland OR For further information, see Appendices D and E of the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, and Appendices G and H of the August 2005 Site Investigation report (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. Also see the responses to Questions 27a and 27b. The other (non-bold) companies/persons listed above have historically received or currently receive waste and/or used materials from the PGE waste and used materials handling facilities, which may have included waste and/or used material from Station E Substation. The Harborton Substation, a historical PGE waste and used materials handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7).	
d. in general terms, the nature and quantity of the non- hazardous materials involved in each such arrangement;	See the response to Question 27c.	
e. in general terms, the nature and quantity of any hazardous materials involved in each such arrangement;	See the response to Question 27c.	

EPA Question	Response	Records/Information Available
f. the owner of the materials involved in each such arrangement, if not Respondent;	Not applicable. PGE was the generator of the waste.	
g. all tests, analyses, analytical results or manifests concerning each hazardous material involved in such transactions;	See the response to Question 27c.	
h. the address(es) for each Property, precise locations at which each material involved in such transactions actually was disposed or treated;	See the response to Question 27a.	
i. the owner or operator of each facility at which hazardous or non-hazardous materials were arranged to be disposed at within the Investigation Area;	See the response to Question 27a.	
j. who selected the location to which the materials were to be disposed or treated;	PGE personnel in charge of environmental matters and consultants. See the response and documents attached for Question 38, as well as the documents attached in response to Question 6g.	See Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf Q06g_Organizational Charts.pdf Also see all Question 38 Attachments
k. who selected the Property as the location at which hazardous materials were to be disposed or treated; and	PGE personnel in charge of environmental matters and consultants. See the response and documents attached for Question 38, as well as the documents attached in response to Question 6g.	See Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf Q06g_Organizational Charts.pdf Also see all Question 38 Attachments
l. any records of such arrangement and each shipment.	See the response to Question 27c.	
28. Describe the plants and other buildings or structures where Respondent carried out its operations at each Property within the Investigation	Historical Station C Steam Plant (operated 1901-1907) Buildings/Structures included: • Engine Room – Brick building containing engines, generators, rotaries, AB transformers, and other small equipment. • Boiler Room – Brick building containing 14 small boilers.	

EPA Question	Response	Records/Information Available
Area (excluding locations where ONLY clerical/office work was performed).	Historical Station E Power Plant (operated 1905-1953) Buildings/Structures included: • Engine Room – Brick building containing engines, generators, turbines, switch board, bussing, condenser pit, dry vacuum pump, and other small equipment. • Boiler Room – Brick building containing boilers/Dutch ovens, oil pumps, and water pumps. • Four USTs – Stored fuel oil (e.g., bunker fuel) • Smoke Stack • Two Water Tanks • Stock House – Building for storage of wood waste used for fuel • Motor House, Hooper, and Sawdust Conveyor – Transportation of wood waste Current Station E East Substation Buildings/Structures include: • Control building -30 ft by 12 ft steel panel construction, single level building. • Distribution switchgear building – 16 ft by 35 ft prefabricated metal construction, single level building. • Transmission structure – Open frame structural steel supporting 115kV bus. • Distribution structure – Open frame structural steel supporting 13kV bus. • Capacitor racks – Open frame structural steel supporting station capacitors and associated equipment. • Capacitor banks – Metal enclosed. • Switchgear structures – Metal enclosed. Station E West Buildings/Structures include: • Control building – 20 ft by 52 ft steel panel construction, single level building. • Transmission structure – Open frame structural steel supporting 115kV bus. • Distribution structure – Open frame structural steel supporting 13kV bus. • Distribution structure – Open frame structural steel supporting 11kV bus. • Capacitor racks – Open frame structural steel supporting station capacitors and associated equipment. For further details, see the response to Question 13d.	
29. Provide a schematic diagram or flow chart that fully describes and/or illustrates the Respondent's operations on each Property.	Historical operations on this property included building construction, equipment installation, power generation and distribution, equipment maintenance, equipment decommissioning, and building removal. Current operations on this property are limited to construction, equipment installation, power distribution (unmanned), equipment maintenance, and equipment decommissioning. See the attached documents.	Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic.pdf
30. Provide a brief description of the nature of Respondent's operations at each location on each Property		

EPA Question	Response	Records/Information Available
including:		
a. the date such operations commenced and concluded; and	In 1901, PGE constructed the Station C steam plant on a portion of Parcel B. In 1904, PGE commenced site development activities for the Station E power plant on Parcels A and B. • The Station C steam plant generated power from 1901 until 1907. The Station C steam plant was dismantled in 1912/1913. The property was then used for Station E power plant operations and substation operations. • The Station E power plant started generating power in 1905. After 1912/1913, the property upon which the Station C steam plant had been located was also used for Station E power plant operations and substation operations. The Station E power plant operated continuously from 1905 until 1930. From 1930 to 1953, it was operated only during low-water periods and for winter peaking service. In 1953, it was placed on "cold stand-by service" and, after being idle for 15 years, the power plant was retired in 1968. The eastern half of the Station E power plant building was razed in 1977 and the remaining power plant buildings and structures were razed in 1999/2000. • By 1912, the areas of Parcels A and B not used for the Station E power plant were being used as a substation. By 1954, Station E East was being used exclusively for substation operations. The parcels that currently comprise Station E West were purchased in 1955 (Parcel F) and 1972 (Parcel I). Since those purchase dates to present, Station E West has been used exclusively for substation operations.	
b. the types of work performed at each location, including but not limited to the industrial, chemical, or institutional processes undertaken at each	Historical power plant activities: PGE operated the Station C steam plant (from 1901-1907) and Station E power plant (1905-1953) for power generation. Steam was generated at the Station C steam plant by burning wood waste. Power was initially generated at Station E power plant by burning oil and wood waste. The Station E power plant was converted to a coal-fired unit during World War I and was converted back to an oil-fired unit after World War I. Substation activities (1912-present): Power distribution, operation of equipment, routine maintenance, cleaning, inspection of equipment, minor painting, transfer of oil from supply tanks to equipment, transfer of oil between equipment and temporary storage tanks, renewal of lubricants and various consumable fluids, reconfiguration of equipment, upgrading equipment components, and testing and calibration of equipment. The substation has been unmanned since 1957. Equipment maintenance activities: Maintenance of equipment, generation of maintenance waste, disposal of maintenance waste, and removal of obsolete equipment. Construction activities: Excavation, construction of power plant structures, demolition and removal of power plant structures, removal of decommissioned USTs, erection of substation structures, welding, painting, wiring, carpentry, installing equipment, and assembly of large equipment.	See Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic.pdf

EPA Question	Response	Records/Information Available
	See the documents attached in response to Question 29, as well as the responses to Questions 5g, 13d, and 13k.	
31. If the nature or size of Respondent's operations changed over time, describe those changes and the dates they occurred.	See the responses to Questions 5g, 13d, and 13k.	
32. List the types of raw materials used in Respondent's operations, the products manufactured, recycled, recovered, treated, or otherwise processed in these operations.	Historical power plant activities: Steam was generated at the Station C steam plant by burning wood waste. Power at the Station E power plant was initially generated by burning oil and wood waste; the power plant was converted to a coal-fired unit during World War I and was converted back to an oil-fired unit after World War I. For further details, see the responses to Questions 5g, 13d, and 13k. Substation activities: No raw materials are currently used in the operation of the substation. No products are currently manufactured, recycled, recovered, treated or processed during operations at Station E Substation. Used mineral oil (<1 ppm PCBs) is recycled and reused after a filtering process at PSC.	
33. Provide copies of Material Safety Data Sheets (MSDS) for materials used in the Respondent's operations.	The products/materials currently used at PGE properties within Oregon and potentially used at the Station E Substation are listed in the attached document (Q33_08 EMC List.pdf). Material Safety Data Sheets (MSDS) for these products/materials are provided in a supplemental submittal (Supplemental Submittal S2). Products/materials used in the past are similar to those used currently.	Question 33 Attachment Q33_08 EMC List.pdf
34. Describe the cleaning and maintenance of the equipment and machinery involved in these operations, including but not limited to:	Substation Maintenance Activities: Routine visual inspections are performed once a month on most of the electrical equipment, including transformers, breakers, switches, regulators, motor operators, meters and relays, and batteries. Lighting systems are visually inspected and operation tests are performed once a month. Inspection of the control systems are performed as needed. Substation Cleaning Activities: Cleaning of electrical equipment varies. Large transformers are cleaned annually, breakers are cleaned based on the number of operations and time since the last inspection, switches are cleaned as needed, insulators are cleaned during scheduled outages, regulators are cleaned or replaced as needed, meters and relays are cleaned during routine calibration, batteries are cleaned approximately twice a year, and the non-electrical surfaces of control systems are cleaned during major construction. Historical Maintenance and Cleaning Activities: To the best of PGE's knowledge, after reasonable inquiry, historical maintenance and cleaning activities were likely similar to current substation electrical equipment maintenance and cleaning activities, but included maintenance and cleaning	Question 34 Attachment Q34_Maintenance Activities.pdf Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf Also see Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic.pdf

EPA Question	Response	Records/Information Available
	of engines, turbines, and generators. Please see the attached cleaning and maintenance activities document (Q34_Maintenance Activities.pdf) for further details, as well as the response and documents for Question 29, and the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a.	
a. the types of materials used to clean/maintain this equipment-machinery;	The primary materials that may have been used for equipment maintenance include transformer oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid, and paint.	
b. the monthly or annual quantity of each such material used.	The materials used for equipment maintenance are not currently stored on site, but were historically stored in the Station E power plant building during the historical Station E power plant operations. To the best of PGE's knowledge, after reasonable inquiry, no detailed logs of exact quantities of maintenance materials used or oil/routine maintenance waste removed from the substations/properties are available.	
c. the types of materials spilled in Respondent's operations;	Materials potentially spilled during operations include oil and fluid from equipment spills or leaks.	
d. the materials used to clean up those spills;	The following are PGE general spill response procedures. • Minor equipment spills or leaks are cleaned up using sorbent materials. • Major spills are cleaned up using sorbent materials, berms, and necessary equipment. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) attached for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Station E Substation.	See all Question 19 Attachments Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf
e. the methods used to clean up those spills; and	Minor equipment spills or leaks are cleaned up as needed by wiping up the excess oil/fluid with on-hand absorbent materials or removing small areas of gravel/soil. Major spills are immediately reported to the System Control Center. PGE's spill response crew is dispatched to clean up the oil. Soiled material is placed into a marked barrel and disposed of properly. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) attached for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Station E Substation.	See all Question 19 Attachments Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf
f. where the materials used to clean up those spills were disposed of.	Materials potentially contaminated with PCBs are sealed in barrels and transferred to PGE's waste and used materials handling facility (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC). If not ascertainable from testing the equipment generating the spill, these wastes are tested to determine a disposal location appropriate for its PCB concentration once they are received at the waste and used materials handling facility. Materials containing PCBs are disposed at different facilities depending on the concentration of the originally spilled materials, if known, or the concentration in the waste materials. Materials containing PCBs may be temporarily stored at one of PGE's waste and used materials handling facilities (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC)	See all Question 21 Attachments

EPA Question	Response	Records/Information Available
	prior to disposal. Wastes not contaminated with PCBs are containerized separately and transferred to PGE's waste and used materials handling facility (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC) for interim storage prior to disposal. For further details, see the response and documents for Question 21.	
35. Describe the methods used to clean up spills of liquid or solid materials during Respondent's operation.	Minor spills or leaks are cleaned up as they occur. The fluid is wiped up with on-hand absorbent materials and spot removal of oil-stained gravel/soil is conducted. Major spills are immediately reported to the PGE System Control Center. PGE's spill response crew is dispatched to clean up the spill. Soiled material is placed into a marked barrel and disposed of properly. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) attached for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Station E Substation.	See all Question 19 Attachments Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf
36. For each type of waste (including by-products) from Respondent's operations, including but not limited to all liquids, sludges, and solids, provide the following information: a. its physical state; b. its nature and chemical composition; c. its color; d. its odor. e. the approximate monthly and annual volumes of each type of waste (using such measurements as gallons, cubic yards, pounds, etc.); and f. the dates (beginning & ending) during which each type of waste was produced by Respondent's operations.	PGE operational waste varies from month to month and year to year. The following is a summary of the type of wastes that are, or have been, generated from the historical and current operations at the Site: Remediation waste includes: • 560-barrel and 1520-barrel UST solidified contents (solidified oily water) – solid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, approximately 2,000 gallons, 1993/1994 • 2,140-barrel UST contents (oily water) – liquid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, approximately 30,0000 gallons, 1994 • 2,140-barrel UST solidified contents (solidified oily water) – solid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, approximately 6,700 gallons or 140 tons, 1994 • Soil containing petroleum hydrocarbons – solid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, approximately 5,145 tons, 1994 • UST steel (not covered in oil) – solid, metal, metallic, none, approximately 64,200 lbs, 1994 • UST steel (covered in oil) – solid, metal, metal coated in petroleum hydrocarbons, black/metallic, petroleum hydrocarbon odor, unknown, 1994 • Soil containing oil and PCBs – solid, petroleum hydrocarbon- and PCB-containing soil, brown, sweet odor, approximately 170,000 kg (18.7 tons), 1995 • Lead-based paint waste – solid, lead-based waste (paint chips, soil, PPE, and filters), various, unknown, six 55-gallon drums, 2000 • Demolition debris and soil containing petroleum hydrocarbons – solid, mixed composition debris and petroleum hydrocarbon-containing soils, various/black-brown, petroleum hydrocarbon odor, 1,500 cubic yards, 2000 • 2140-barrel UST steel liner (not covered in oil) – solid, metal, metallic, none, unknown, 2004 • 2,140-barrel UST liquid contents – liquid, petroleum hydrocarbons, black, petroleum	See Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf Also see all Question 21 Attachments Also see Question 33 Attachment Q33_EMC List.pdf Also see all Question 62 Attachments

EPA Question	Response	Records/Information Available
	hydrocarbon odor, 8,850 gallons oily water and 6,900 gallons oil, 2004 • 2,140-barrel UST solidified contents – solid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, 10 barrels, 2004 • Soil containing petroleum hydrocarbons – solid, petroleum hydrocarbon-containing soil, black-brown, petroleum hydrocarbon odor, 1,280 tons, 2004 • Soil/gravel removed in response to spills or leaks – solid, petroleum hydrocarbon- and/or PCB-containing soil/gravel, black-brown-grey, petroleum hydrocarbon- and/or sweet odor, various, 1987, 2003, and 2004 Large transformers and capacitors changed-out with non-PCB-containing (< 50 ppm) oil: • Capacitors with PCB-containing oil – solid (liquid filled), metal (filled with petroleum hydrocarbons with PCBs), metallic, petroleum hydrocarbon odor/sweet odor, nine pallets and five drums (total of 240 capacitors) at a total of 17,304 lbs, 1994 • Transformer oil containing PCBs – liquid, petroleum hydrocarbons with PCBs, black, petroleum hydrocarbon/sweet odor, 7,500 kg or 2,200 gallons, 2004 General materials/wastes not contaminated with PCBs include: • Non-contact Cooling Water (historical only) – liquid, non-contact cooling water, odorless, unknown volume discharged, discharged from approximately 1905-1953. • Solvents – liquid, oil-based chemical solvents, petroleum hydrocarbon smell, unknown quantity, early 1900s-present • Batteries – solid, alkaline/zinc-carbon/lithium-based batteries, no odor, unknown quantity, early 1900s-present • Scrap metal – solid, metallic (e.g., steel), none to metallic odor, unknown quantity, early 1900s-present • Light bulbs – solid, incandescent and fluorescent light bulbs, no odor, unknown quantity, early 1900s-present • General garbage – mixed composition, various colors, various odors, unknown quantity, early 1900s-present • Construction debris – mixed composition, various colors, various odors, unknown quantity, early 1900s-present • Soils removed during excavation for equipment/building demolition/installation – solid, soil, brown, organic odor, unknown, early 1900s-present • Used/excess lubricants, oils, and other fluids – liquid, petroleum hydrocarbons, various, petroleum hydrocarbon odor, unknown, early-mid 1990s • Obsolete equipment (e.g., transformers, capacitors) – solid, metal, metallic/petroleum hydrocarbon odor, unknown, early-mid 1990s • Rags used to clean equipment – solid, fabric material, various, alcohol-petroleum hydrocarbon odor, unknown, early-mid 1990s • Absorbents used to clean up leaks or spills – solid, absorbent material, various, petroleum hydrocarbon odor, unknown, early-mid 1990s • Ballasts – solid, metallic, electrical lamp component, various, no odor, unknown, early-mid 1990s	

EPA Question	Response	Records/Information Available
	General materials/wastes potentially contaminated with PCBs (after 1929, the earliest generalized marketing of PCBs in the United States) include: • Used/excess lubricants, oils, and other fluids – liquid, petroleum hydrocarbons, various, petroleum hydrocarbon odor, unknown, mid 1900s-present • Obsolete equipment (e.g., transformers, capacitors) – solid, metal, metallic/petroleum hydrocarbon odor, unknown, mid 1900s-present • Rags used to clean equipment – solid, fabric material, various, alcohol-petroleum hydrocarbon odor, unknown, mid 1900s-present • Absorbents used to clean up leaks or spills – solid, absorbent material, various, petroleum hydrocarbon odor, unknown, mid 1900s-present • Ballasts – solid, metallic, electrical lamp component, various, no odor, unknown, mid 1900s-present Also see the MSDS documents provided in a supplemental submittal (Supplemental Submittal S2), the documents (Q15_UST Removal and Remediation 1995.pdf and Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15, and the responses and documents for Questions 21, 33, and 62. Also see the separate 104(e) response for the Harborton Substation (historically at PGE waste and used materials handling facility) and the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7).	
37. Provide a schematic diagram that indicates which part of Respondent's operations generated each type of waste, including but not limited to wastes generated by cleaning and maintenance of equipment and machinery and wastes resulting from spills of liquid materials.	See the response and documents for Question 29, as well as the document (Q21a_Waste Stream Summary) attached in response to Question 21a.	See Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic.pdf Also See Question 21 Attachment Q21a_Waste Stream Summary.pdf
38. Identify all individuals who currently have and those who have had responsibility for Respondent's environmental matters (e.g. responsibility for the disposal, treatment, storage, recycling, or sale of Respondent's wastes). Also provide each individual's job title, duties, dates performing those duties, supervisors for those duties, current position or the date of the individual's resignation, and the	See the attached document for a listing of those responsible for environmental matters from 1980 to present. See the attached 1993 and 1997 Job Descriptions for Environmental Services Manager. See the attached document for management structural information 1982-2008. Also see the documents attached in response to Question 6g.	Question 38 Attachments Q38_Res. For Environmental Matters.pdf Q38_Mgr. Env. Svc. Job description – 1993.pdf Q38_Mgr. Env. Svc. Job description – 1997.pdf Q38_HRIS Structure Info. 1982-2008-4.0.pdf Also see Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf

EPA Question	Response	Records/Information Available
nature of the information possessed by such individuals concerning Respondent's waste management.		
39. For each type of waste describe Respondent's contracts, agreements or other arrangements for its disposal, treatment, or recycling.	In general terms, waste and used material was historically either transferred directly to the disposal facility, or to one of the following PGE waste and used materials handling facilities for interim storage: Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, in general terms, waste and used materials are either transferred directly to the disposal facility or to one of the following PGE waste and used materials handling facilities: PSC or Wilsonville (only soil/gravel with < 50 ppm PCBs). To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21 and in the appendices of the two reports (Q15_2005 Site Investigation - Substation E.pdf and Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15. Waste disposal permits are attached in response to Question 52. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Station E Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).	See Question 15 Attachments Q15_2005 Site Investigation - Substation E.pdf Q15_UST Removal and Remediation 1995.pdf Also see all Question 21 Attachments Also see all Question 52 Attachments
40. Provide copies of such contracts and other documents reflecting such agreements or arrangements, including but not limited to: a. state where Respondent sent each type of its waste for disposal, treatment, or recycling; b. identify all entities and individuals who picked up waste from Respondent or who otherwise transported the waste away from Respondent's operations (these companies and individuals shall be called "Waste Carriers" for purposes of this Information Request); c. if Respondent transported any of	In general terms, waste and used materials were historically either transferred directly to the disposal facility or to one of the following PGE waste and used materials handling facilities for interim storage: Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, in general terms, waste and used materials are either transferred directly to the disposal facility or to one of the following PGE waste and used materials handling facilities: PSC or Wilsonville (only soil/gravel with < 50 ppm PCBs). To the best of PGE's knowledge, after reasonable inquiry, those companies/persons with whom PGE currently has arrangements for disposal/recycling/destruction of wastes and/or used material are listed in the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. The document summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal facility. To the best of PGE's knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the attached document (Q40_Waste-Materials Receivers and Carriers.pdf). The following describes the current waste and used material arrangements at PSC, which would	Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf Also see all Question 21 Attachments Also see Question 27 Attachment Q27_Waste-Materials Receivers within IA.pdf Also see all Question 52 Attachments

EPA Question	Response	Records/Information Available
its wastes away from its operations, please so indicate; d. for each type of waste specify which Waste Carrier picked it up; e. indicate the ultimate disposal/recycling/treatment location for each type of waste. f. provide all documents indicating the ultimate disposal/recycling/treatment location for each type of waste; and g. state the basis for and provide any documents supporting the answer to the previous question.	have been similar to the historic waste arrangements at Harborton Substation, Sellwood Substation, and PSC (although it is likely that different contractors/service providers were historically utilized): • Earth Protection Services, Inc. (EPSI) recycles a variety of recyclable waste and used materials from PSC (e.g., ballasts, batteries, and mercury containing articles). New empty containers are exchanged for the filled containers. If there are any concerns about the integrity of the new containers or any other concerns, PGE's Environmental Services (which processes all EPSI invoices) is called to ensure that the vendor promptly corrects the problem. EPSI is a nationally recognized recycling vendor. • Used transformer/insulating oil (< 1 ppm PCBs) is recycled in house by PGE, by Univar USA Inc, or Transformer Technologies. • Univar picks up and transports used transformer/insulating oil (≥ 50 ppm PCBs) to either Clean Harbors Deer Park or to Clean Harbors Aragonite. In addition, Univar picks up and transports used rags and absorbent material (≥ 50 ppm PCBs) to Arlington Landfill. • Oil-filled obsolete transformers and other electrical equipment (< 50 ppm PCBs) are transported to Transformer Technologies. Oil-filled obsolete transformers and other electrical equipment (≥ 50 ppm PCBs) are sent to either Clean Harbors Deer Park or Clean Harbors Aragonite for incineration. Oil-filled ballasts (> 1 ppm PCBs) are sent to Arlington Landfill or Clean Harbors Deer Park. • Used rags and absorbent material (1 to 50 ppm PCBs) are picked up by NRC Environmental Services and transported to Columbia Ridge Landfill. • Used transformer/insulating oil (1 to 50 ppm PCBs) is picked up by Transformer Technologies and is incinerated by Transformer Technologies or recycled at Environmental Management of Kansas City. • Non-PCB containing used oil (e.g., hydraulic fluids, compressor oil, and motor oil), used oil filters, and used antifreeze from the maintenance shop are collected in labeled 55-gallon drums and recycled or used for energy recovery by Thermo Fluids. • All parts washers are maintained under license by Safety Kleen which performs monthly service calls. Safety Kleen recycles all used non-hazardous solvents and brake solution, processing the solvent and brake solution for reuse. • Aerosol can drainings are collected in industry standard aerosol can puncturing devices. At PSC, punctured cans are recycled by CalBag Metals Recycling (non-ferrous metal) or Schnitzer Steel (ferrous metal). When the drums are near full, they are sampled by a licensed laboratory to help characterize the waste prior to collection.	

EPA Question	Response	Records/Information Available
	Other non-PCB-contaminated scrap metal is also recycled by CalBag Metals Recycling (non-ferrous metal) or Schnitzer Steel (ferrous metal). • Hazardous solvents and paint drainings from aerosol cans are picked up by Veolia Environmental Services and incinerated at Clean Harbors Deer Park. • Non-PCB-contaminated used equipment parts (e.g., gaskets, hoses, and air filters), auto parts (brake pads, belts, and air filters), and general trash are picked up by Waste Management and transported to various Waste Management landfills. • Drained obsolete equipment (< 50 ppm PCBs) is recycled by Coleman Metals and drained obsolete equipment (50 to 500 ppm PCBs) is disposed of at Arlington Landfill. Soil and gravel removed during excavations (from upgrades, spill response, or remediation) are tested and disposed of appropriately. The soil and gravel are either transported directly from the site to the disposal facility or are transported to Wilsonville (only soil/gravel with < 50 ppm PCBs) and/or PSC for interim storage before bulk disposal at a location dependant upon PCB-content. To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52. Also see the response and document attached in response to Question 27. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response (historically a PGE waste and used materials handling facility within the Investigation Area), the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).	
41. Describe all wastes disposed by Respondent into Respondent's drains including but not limited to: a. the nature and chemical composition of each type of waste; b. the dates on which those wastes were disposed; c. the approximate quantity of those wastes disposed by month and year;	There were floor drains and lavatories located within the Station E power plant building until at least 1975. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if they were connected to the City of Portland's sewer system. The power plant was not used after 1953 and all structures and foundations were removed by 2000. To the best of PGE's knowledge, after reasonable inquiry, no drains are currently present on the property. To the best of PGE's knowledge, after reasonable inquiry, no waste disposal or spills, leaks, releases, or discharges of waste occurred into the historical drains at the Station E Substation.	

EPA Question	Response	Records/Information Available
d. the location to which these wastes drained (e.g. septic system or storage tank at the Property, pre-treatment plant, Publicly Owned Treatment Works (POTW), etc.); and e. whether and what pretreatment was provided.		
42. Identify any sewage authority or treatment works to which Respondent's waste was sent.	There were floor drains and lavatories located within the Station E power plant building until at least 1975. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if they were connected to the City of Portland's sewer system. The power plant was not used after 1953 and all structures and foundations were removed by 2000. To the best of PGE's knowledge, after reasonable inquiry, no waste disposal or spills, leaks, releases, or discharges of waste occurred into the historical drains at the Station E Substation. To the best of PGE's knowledge, after reasonable inquiry, the only sewage authority or treatment works to which the Station E Substation waste could have been delivered was the City of Portland's Columbia Boulevard Wastewater Treatment Plant during the 1993/1994 UST remediation activities. In 1993, the City of Portland issued PGE a temporary sewer connection permit for the Station E Substation. Per the permit and temporary sanitary sewer connection, PGE disposed of the remediated water (via in situ treatment) from the 1,520-barrel and 2,140-barrel USTs into the sanitary sewer system in 1993/1994. For further information, please see the responses to Questions 21 and 52. Also see pages 4-1 and 4-2 and Appendix B from the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15.	See Question 15 Attachment Q15_UST Removal and Remediation 1995.pdf
43. Describe all settling tank, septic system, or pretreatment system sludges or other treatment wastes resulting from Respondent's operations.	To the best of PGE's knowledge, after reasonable inquiry, there were/are no settling tanks, septic systems, or pretreatment system sludges resulting from operations at Station E Substation. To the best of PGE's knowledge, after reasonable inquiry, the only treatment wastes resulting from activities at Station E Substation was the remediated water (via in situ treatment) from the 1,520- and 2,140-barrel USTs in 1993/1994. For further information, please see the responses to Questions 21 and 52. Also see pages 4-1 and 4-2 and Appendix B from the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15.	See Question 15 Attachment Q15_UST Removal and Remediation 1995.pdf
44. If applicable, describe the facilities, processes and methods Respondent or Respondent's contractor used, and activities engaged in, either currently or	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at Station E Substation.	

EPA Question	Response	Records/Information Available
in the past, related to ship building, retrofitting, maintenance or repair, including, but not limited to, dry-docking operations, tank cleaning, painting and re-powering.		
45. Describe any hazardous substances, wastes, or materials used or generated by the activities described in response to the previous Question and how these hazardous substances, materials and wastes were released or disposed of.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at Station E Substation.	
46. Provide copies of any records you have in your possession, custody or control relative to the activities described in response to the previous two Questions.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at Station E Substation.	
47. Describe any process or activity conducted on a Property identified in response to Question 4 involving the acquisition, manufacture, use, storage, handling, disposal or release or threatened release of polychlorinated biphenyl(s) ("PCB(s)" or PCB(s)-containing materials or liquids.	<u>Historical Station C Steam Plant</u> The Station C stream plant generated power from 1901 until 1907. Power was generated by burning wood waste. The plant was decommissioned in 1912/1913. The Station C steam plant ceased operations prior to the generalized marketing of PCBs in the United States starting in 1929. <u>Historical Station E Power Plant</u> The Station E power plant generated power from 1905 until 1953. Power was generated by burning oil, wood waste, and coal. Historical equipment at the power plant, including AB transformers, may have contained oil with PCBs. The primary materials that may have been used for equipment maintenance include transformer oil (that may have contained PCBs), solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid, and paint. In 1953, the Station E power plant was placed on "cold stand-by service" and, after being idle for 15 years, the power plant was retired in 1968. Sometime between 1968 and 1977, when the eastern half of the building was razed, the equipment was removed from the Site. <u>Substation Operations and Recent Remedial Activities</u> In general, PGE replaces PCB-containing or potentially PCB-contaminated equipment (e.g., transformers, capacitors, lamp ballasts, circuit breakers, bushings, and step regulators) with non-PCB oil containing equipment (< 50 ppm PCBs) as they are removed from service. The	See all Question 15 Attachments Also see all Question 21 Attachments Also see all Question 29 Attachments Also see Question 62 Attachments Q62_05-08-1987_Oil Spill Questionaire.pdf Q62_11-16-2004_Discharge Worksheet.pdf

EPA Question	Response	Records/Information Available
	majority of PCB-containing capacitors at Station E Substation were changed out with non-PCB containing capacitors (< 1 ppm PCBs) in 1994; see the document (Q21a_1994-08-16_HazWaste Manifest 01446.pdf) attached in response to Question 21a. Sometime between 2003 and 2004, the PCB-containing oil was drained out of the large PCB-containing transformer (Transformer 10474) at Station E West and replaced with non-PCB-containing oil; see the document (Q21a_2004-10-04_HazWaste Manifest.pdf) attached in response to Question 21a. The primary materials that may have been used for equipment maintenance include dielectric fluids (oil) and transformer oil, which may have historically contained PCBs. To the best of PGE's knowledge, after reasonable inquiry, other than minor repairs, electrical equipment maintenance was generally not performed on site. Instead, equipment was taken out of service and transported to PGE's waste and used materials handling facility for repairs and retrofitting. See the document (Q21a_2009_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment at Station E East and Station E West (as of 2008). The document identifies the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. Several pieces of the oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the document (Q21a_1986-11-07_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Other oil-filled equipment transportation, disposal, and testing documents include: • The document (Q21a_1986-12-10_Transport of Capacitors.pdf) attached in response to Question 21a provides the general transport documents for non-leaking oil-filled capacitors removed from the Station E Substation in 1986. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). • The document (Q21a_1988-08-23_Transport of Capacitors.pdf) attached in response to Question 21a is the general transport document for a non-working PCB-containing capacitor removed from the Station E Substation in 1988. This capacitor was picked up for disposal/recycling by ENSCO (now Clean Harbors). • The document (Q21a_1999-11-23.pdf) attached in response to Question 21a provides the PCB analytical results for the transformer oil in four transformers at Station E Substation in 1999. The PCB results were non-detect for all four transformers. Soil, gravel, concrete, and/or water testing has also been conducted, as needed, in conjunction with various improvements/construction, maintenance, and remedial activities at the Site, including in response to equipment spills. This testing has periodically uncovered areas of PCB contamination. When found, these areas were cleaned up and wastes are disposed of properly.	

EPA Question	Response	Records/Information Available
	Verification sampling was conducted to confirm cleanup. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the known excavations of PCB-containing soil: • On 8 May 1987, approximately 1 gallon of PCB-containing (75 ppm) regulator oil spilled on the soil/gravel behind the 8-foot fence within Station E East; see the document (Q62_05-08-1987_Oil Spill Questionaire.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. To the best of PGE's knowledge, after reasonable inquiry, the PCB- and petroleum hydrocarbon-containing soil and gravel were likely disposed at the Arlington Landfill after interim storage at a PGE waste and used materials handling facility. • In 1993, PGE commenced enlarging and upgrading the Station E Substation. During the enlarging and upgrading of Station E Substation, PGE also characterized the soil/gravel and concrete at Station E East and Station E West for potential PCB contamination. The characterization of the soil identified locations of PCB contamination; see the analytical results (Q15_1994-04-18.pdf, Q15_1994-04-26.pdf, Q15_1994-05-04.pdf, Q15_1994-06-07.pdf, Q15_1994-09-01.pdf, Q15_1994-09-02.pdf, Q15_1994-09-09a.pdf, Q15_1994-09-09b.pdf, Q15_1994-09-15a.pdf, and Q15_1994-09-15b.pdf) attached in response to Question 15. In 1994, PGE remediated (removed) approximately 170,000 kg (18.7 tons) of petroleum hydrocarbon- and PCB-containing soil and gravel from Station E East and Station E West and disposed of them at the Arlington Landfill; see the hazardous waste manifests (Q21a_1994-06-01_HazWaste Manifest 01407.pdf, Q21a_1994-08-25_HazWaste Manifest 01408.pdf, Q21a_1994-08-30_HazWaste Manifest 01409.pdf, Q21a_1994-08-30_HazWaste Manifest 01410.pdf, Q21a_1994-08-31_HazWaste Manifest 01411.pdf, Q21a_1994-08-31_HazWaste Manifest 01412.pdf, Q21a_1994-09-08_HazWaste Manifest 01451.pdf, Q21a_1994-09-09_HazWaste Manifest 01452.pdf, Q21a_1994-09-14_HazWaste Manifest 01453.pdf, and Q21a_1994-09-21_HazWaste Manifest 01454.pdf) attached in response to Question 21a. • On 16 November 2004, approximately 0.5 gallon of diesel fuel from a Bobcat (mini-hoe truck) spilled on soil and gravel within Station E West during construction activities; see the document (Q62_11-16-2004_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 9 square feet of petroleum hydrocarbon-containing soil and gravel (with < 0.2 ppm PCBs) were disposed at Hillsboro Landfill; see the document (Q21a_Station E East_WAL_11-29-2004.pdf) attached in response to Question 21a. For further information, see the response and documents attached for Questions 15, 21, and 62. Also see the documents attached in response to Question 29, and the annual PCB reports (1978-2008) for PGE (all PGE sites combined), which are provided in a supplemental submittal (Supplemental Submittal S3).	

EPA Question	Response	Records/Information Available
48. For each process or activity identified in response to the previous Question, describe the dates and duration of the activity or process and the quantity and type of PCB(s) or PCB(s) containing materials or liquids.		
a. the manufacturer and serial number of each transformer; b. the quantity of oil in each transformer; c. the concentrations of PCB contained in the transformer oil; d. the time period or periods in which these transformers were sent to the Property;	<u>Historical Station C Steam Plant</u> The Station C stream plant generated power from 1901 until 1907. Power was generated by burning wood waste. The plant was decommissioned in 1912/1913. The Station C steam plant ceased operations prior to the generalized marketing of PCBs in the United States starting in 1929. <u>Historical Station E Power Plant</u> The Station E power plant generated power from 1905 until 1953. Power was generated by burning oil, wood waste, and coal. Historical equipment at the power plant, including AB transformers, may have contained oil with PCBs. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have the information requested (manufacturer, serial number, quantity of oil, or concentrations of PCBs) concerning these transformers. In 1953, the Station E power plant was placed on "cold stand-by service" and, after being idle for 15 years, the power plant was retired in 1968. Sometime between 1968 and 1977, when the eastern half of the building was razed, the equipment was removed from the Site. <u>Substation Operations and Recent Remedial Activities</u> Substation equipment, including transformers, was first installed at Station E East and Station E West in approximately 1912 and 1955, respectively. Since then, some equipment has been installed, upgraded, and replaced at the Station E Substation. See the document (Q21a_2009_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment currently at Station E East and Station E West. The document identifies the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. Several of the pieces of oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the attached document (Q21a_1986-11-07_Oil Filled Equipment.pdf) for the list of oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). The document (Q21a_1999-11-23.pdf) attached in response to Question 21a provides the PCB analytical results for the transformer oil in four transformers at Station E Substation in 1999. The PCB results were non-detect for all four transformers.	Also see Question 21 Attachment Q21a_2009_Oil Filled Equipment.pdf Q21a_1986-11-07_Oil Filled Equipment.pdf Q21a_1999-11-23.pdf
e. details about how each	Equipment is handled by trained, qualified personnel. Substation equipment is energized and in	See Question 21 Attachment

EPA Question	Response	Records/Information Available
transformer was handled or stored or otherwise processed;	service. Obsolete equipment is drained prior to disposal/recycling, if possible. Drained oil is incinerated or recycled, depending on PCB content. Obsolete equipment may be transferred to a PGE waste and used materials handling facility for interim storage prior to disposal/recycling. The obsolete equipment is incinerated, landfill disposed, or recycled based on PCB content and structural composition. See the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. Some used, but not obsolete, transformers have been sold to other companies/persons. These are documented in the Supplemental Submittal S7 (documentation from facilities that may have received waste and used materials from properties within the Investigation Area). For further information, see the response to Questions 21, 27, and 40. Also see the separate 104(e) response for the Harborton Substation, which was also historically a PGE waste and used materials handling facility and the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7).	Q21a_Waste Stream Summary.pdf
f. information describing the contractual relationship Respondent had, if any, with owners or users of the respective transformers, including but not limited to, liability for disposal;	Not applicable. Equipment is owned by PGE.	
g. information on any other oil filled electrical equipment at the Property, and;	The document attached in response to Question 21a (Q21a_2009_Oil Filled Equipment.pdf) lists the current oil-filled equipment at Station E Substation. Also see the document (Q21a_1986-11-07_Oil Filled Equipment.pdf) attached in response to Question 21a, which lists the oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Other oil-filled equipment transportation, disposal, and testing documents include: • The document (Q21a_1986-12-10_Transport of Capacitors.pdf) attached in response to Question 21a provides the general transport documents for non-leaking oil-filled capacitors removed from the Station E Substation in 1986. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). • The document (Q21a_1988-08-23_Transport of Capacitors.pdf) attached in response to Question 21a is the general transport document for a non-working PCB-containing capacitor removed from the Station E Substation in 1988. This capacitor was picked up for disposal/recycling by ENSCO (now Clean Harbors). • In 1994, the majority of PCB-containing capacitors were changed out with non-PCB-	See Question 21 Attachment Q21a_2009_Oil Filled Equipment.pdf Q21a_1986-11-07_Oil Filled Equipment.pdf Q21a_1986-12-10_Transport of Capacitors.pdf Q21a_1988-08-23_Transport of Capacitors.pdf Q21a_1994-08-16_HazWaste Manifest 01446.pdf

EPA Question	Response	Records/Information Available
	containing capacitors (< 1 ppm PCBs). The PCB-containing capacitors were transferred to PSC for interim storage. In August 1994, the PCB-containing capacitors (five drums and nine pallets, a total of 240 capacitors) were incinerated at Rollins Environmental Services Inc at Deer Park; see the document (Q21a_1994-08-16_HazWaste Manifest 01446.pdf) attached in response to Question 21a.	
h. complete copies of any contracts, invoices, receipts, or other documents related to the transformers or other oil filled electrical equipment to the Property.	To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21a. Waste disposal permits are attached in response to Question 52. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and used materials from the Station E Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).	See all Question 21 Attachments Also see all Question 52 Attachments
49. For each process or activity identified in response to the previous two Questions, identify the location of the process or activity on the Property.	See the document (Q21a_2009_Oil Filled Equipment.pdf) attached in response to Question 21a, which lists the current oil-filled equipment in service at Station E Substation. The document identifies the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, the test date for PCBs, and the total volume of oil. Also see the document (Q21a_1986-11-07_Oil Filled Equipment.pdf) attached in response to Question 21a, which lists the oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Also see the documents attached in response to Question 19, which include figures that show the location of oil-filled equipment.	See Question 21 Attachment Q21a_2009_Oil Filled Equipment.pdf Q21a_1986-11-07_Oil Filled Equipment.pdf Also see all Question 19 Attachments
Section 5.0 - Regulatory Information		
50. Identify all federal, state and local authorities that regulated the owner or operator of each Property and/or that interacted with the owner or operator of each Property. Your response is to address all interactions and in particular all contacts from agencies/departments that dealt with health and safety issues and/or environmental concerns.	The primary federal, state and local agencies that have regulated PGE at this Site include: • City of Portland (including fire, medical, and police): building safety inspections, facility enhancements, building demolitions/constructions, sewer connections, notification of spills, site investigations, • Oregon State Fire Marshal: hazardous substance inventory surveys (HSIS) • Oregon Department of Environmental Quality (DEQ): spills, product/waste disposal, facility enhancements, site investigations • U.S. Environmental Protection Agency (USEPA): for Portland Harbor Superfund Site, Resource Conservation and Recovery Act (RCRA), and Toxic Substances Control Act (TSCA), site investigations • Federal Energy Regulatory Commission (FERC) (previously the Federal Power Commission, FPC): regulatory oversight of the historical Station E power plant • Oregon Department of Energy (ODOE): regulatory oversight of the historical Station E power plant • Oregon Public Utility Commission (OPUC): regulatory oversight of the historical	Question 50 Attachments Q50_1993 Initial DEQ Cleanup Report.pdf Q50_12-06-1993 East.pdf Q50_03-15-1995 Pollock.pdf Q50_07-29-2003 Gainer_Port of Portland.pdf Q50_10-21-2003 Norton.pdf Q50_10-28-2003 Gainer.pdf Q50_11-25-2003 Summers.pdf Q50_11-26-2003 ODonovan.pdf Q50_12-11-2003 Gainer.pdf Q50_12-19-2003 Norton.pdf Q50_12-24-2003 ODonovan.pdf Q50_01-09-2004 Gainer.pdf Q50_01-15-2004 Norton.pdf Q50_09-27-2004 Norton.pdf

EPA Question	Response	Records/Information Available
	steam/power generation plants Regarding health and safety concerns, interaction with the following agencies would occur as a result of a compliance inspection, a consultation visit or during the course of an accident investigation (contact with the OPUC would occur if an accident of a certain severity occurred at a site): • Federal Occupational Safety and Health Administration (OSHA) • Oregon Occupational Safety and Health Administration (OrOSHA) • Oregon Public Utility Commission (OPUC) • Oregon Department of Transportation (ODOT) • FERC • Oregon Department of Energy (ODOE) Of these agencies, OrOSHA performed an inspection at Station E after an accident occurred on 14 June 2006. No citation was issued. For further details, see the response and document attached for Question 51. Please see the attached documents and the documents (Q15_UST Removal and Remediation 1995.pdf, Q15_12-08-2003 Norton - SI Work Plan.pdf, Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf, Q15_09-27-2004 Gainer - SI Work Plan Addendum-Fig5.pdf, and Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. Fire marshal HSIS records from 1991-2009 for all PGE properties, including multiple substations (combined) both within and outside of the Investigation Area, are provided in a supplemental submittal (Supplemental Submittal S9). Also attached are documents (Q50_Sulzer Pumps.pdf and Q50_POP North Boring Results.pdf) detailing the sampling results at Sulzer Pumps and the Port of Portland Terminal 1, located off site, north of Station E Substation. PGE requested these results from the Oregon DEQ.	Q50_08-05-2005 Gainer.pdf Q50_2005-09-26 Norton email.pdf Q50_01-27-2006 Gainer.pdf Q50_02-08-2006 Norton.pdf Q50_2006-03-01 DEQ Source Control Decision.pdf Q50_04-03-2006 Gainer.pdf Q50_06-07-2006 Gainer.pdf Q50_12-06-2006 Norton.pdf Q50_Email correspondences with Oregon DEQ.pdf Q50_1999_HazWaste Registration and Report.pdf Q50_2000_HazWaste Registration and Report.pdf Q50_2001_HazWaste Registration and Report.pdf Q50_2002_HazWaste Registration and Report.pdf Q50_2003_HazWaste Identification Form.pdf Q50_1999-11-08_DEQ_HazWaste Notification.pdf Q50_2002-02-25_DEQ_HazWaste CEG.pdf Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf Q50_2003-12-24_Bidwell_HazWaste Pin.pdf Q50_10-22-1991 COP Sidewalk Repair.pdf Q50_02-02-1993 COP PreApp Conf Summary.pdf Q50_07-16-1993 COP Notice to Apply to Demolish.pdf Q50_07-28-1993 COP Recom to Landmark Comm.pdf Q50_08-01-1993 COP Public Notice.pdf Q50_09-23-1993 Landmark Comm Decision.pdf Q50_12-17-1993 Larson.pdf Q50_04-12-1999 COP Notice to Demolish.pdf Q50_Sulzer Pumps.pdf Q50_POP North Boring Results.pdf Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_12-08-2003 Norton - SI Work Plan.pdf Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf Q15_09-27-2004 Gainer - SI Work Plan Addendum-Fig5.pdf Q15_2005 Site Investigation - Substation E.pdf Also see Question 51 Attachment Q51_OrOSHA 061606.pdf
51. Describe all occurrences associated with violations, citations, deficiencies. and/or accidents concerning each	To the best of PGE's knowledge, after reasonable inquiry, PGE has not had any environmental related violations/citations/deficiencies or accidents for Station E Substation. For spills/discharges, please see the response to Question 62.	Question 51 Attachment Q51_OrOSHA 061606.pdf

EPA Question	Response	Records/Information Available
Property during the period being investigated related to health and safety issues and/or environmental concerns. Provide copies of all documents associated with each occurrence described.	The OrOSHA performed an inspection at Station E after an accident occurred on 14 June 2006 in which a meter relay technician was shocked wile installing a jumper wire on a current transformer circuit; see the attached Inspection Report (Q51_OrOSHA 061606.pdf). The investigation found that the shock resulted due to employee misconduct and no citation was issued.	
52. Provide a list of all local, state and federal environmental permits ever issued to the owner or operator on each Property (e.g., RCRA permits. NPDES permits, etc.). Please provide a copy of each federal and state permit, and the applications for each permit, ever issued to the owner or operator on each Property.	To the best of PGE's knowledge, after reasonable inquiry, Station E Substation does not have any current environmental permits. On 21 December 1993, the City of Portland issued PGE a temporary sewer connection permit for the Station E Substation. Per the permit and temporary sanitary sewer connection, PGE disposed of the remediated water (via in situ treatment) from the 1520- and 2140-barrel USTs into the sanitary sewer system in 1993/1994. Please see pages 4-1 and 4-2 and Appendix B of the February 1995 UST Removal and Remediation (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15. Station E Substation also has/had non-environmental permits: • The attached documents (Q52_01.pdf, Q52_02.pdf, Q52_03.pdf, Q52_04.pdf, Q52_05.pdf, Q52_07.pdf, and Q52_08.pdf) are non-hazardous waste permits for the disposal of waste at the Hillsboro Landfill and Columbia Ridge Landfill, as well as the 1994 Landfill of Oregon permit application (Q52_06.pdf). • PGE obtained a USEPA Hazardous Waste Generator ID number (ORD000013318) for Station E Substation in 1999 for a one-time disposal of lead-based paint waste in 2000. See the documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf, Q21a_HazWasteManifest_Station E_2000.pdf, and Q21a_DEQ Hazardous Waste Site Report.pdf) attached in response to Question 21a. Also see the documents (Q50_1999_HazWaste Registration and Report.pdf, Q50_2000_HazWaste Registration and Report.pdf, Q50_2001_HazWaste Registration and Report.pdf, Q50_2002_HazWaste Registration and Report.pdf, Q50_2003_HazWaste Identification Form.pdf, Q50_1999-11-08_DEQ_HazWaste Notification.pdf, Q50_2002-02-25_DEQ_HazWaste CEG.pdf, Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf, and Q50_2003-12-24_Bidwell_HazWaste Pin.pdf) attached in response to Question 50. Station E currently has Conditionally Exempt Generator (CEG) status. Also attached are a few general PGE disposal permits (Q52_09.pdf and Q52_10.pdf), for which specific contributions from substations are not indicated. A component of the waste disposed under these permits may have originated from Station E Substation.	Question 52 Attachments Q52_01.pdf Q52_02.pdf Q52_03.pdf Q52_04.pdf Q52_05.pdf Q52_06.pdf Q52_07.pdf Q52_08.pdf Q52_09.pdf Q52_10.pdf Also see Question 15 Attachment Q15_UST Removal and Remediation 1995.pdf Also see Question 21 Attachments Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Also see Question 50 Attachments Q50_1999_HazWaste Registration and Report.pdf Q50_2000_HazWaste Registration and Report.pdf Q50_2001_HazWaste Registration and Report.pdf Q50_2002_HazWaste Registration and Report.pdf Q50_2003_HazWaste Identification Form.pdf Q50_1999-11-08_DEQ_HazWaste Notification.pdf Q50_2002-02-25_DEQ_HazWaste CEG.pdf Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf Q50_2003-12-24_Bidwell_HazWaste Pin.pdf
53. Did the owner or operator ever file a	Yes, PGE obtained a USEPA Hazardous Waste Generator ID number (ORD000013318) for	See Question 21 Attachments

EPA Question	Response	Records/Information Available
Hazardous Waste Activity Notification under the RCRA? If so, provide a copy of such notification.	Station E Substation in 1999 for a one-time disposal of lead-based paint waste (removed prior to demolition of the power plant building) in 2000. See the documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf, Q21a_HazWasteManifest_Station E_2000.pdf, and Q21a_DEQ Hazardous Waste Site Report.pdf) attached in response to Question 21a. Also see the documents (Q50_1999_HazWaste Registration and Report.pdf, Q50_2000_HazWaste Registration and Report.pdf, Q50_2001_HazWaste Registration and Report.pdf, Q50_2002_HazWaste Registration and Report.pdf, Q50_2003_HazWaste Identification Form.pdf, Q50_1999-11-08_DEQ_HazWaste Notification.pdf, Q50_2002-02-25_DEQ_HazWaste CEG.pdf, Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf, and Q50_2003-12-24_Bidwell_HazWaste Pin.pdf) attached in response to Question 50. Station E currently has CEG status. Hazardous materials from Station E Substation may have also been disposed after interim storage at a PGE waste and used materials handling facility (e.g., PSC, Sellwood Substation, Harborton Substation, and Wilsonville). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and used materials handling facility, as well as the supplemental submittal of documentation from other facilities that may have received waste and used materials from Station E Substation (Supplemental Submittal S7).	Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Also see Question 50 Attachments Q50_1999_HazWaste Registration and Report.pdf Q50_2000_HazWaste Registration and Report.pdf Q50_2001_HazWaste Registration and Report.pdf Q50_2002_HazWaste Registration and Report.pdf Q50_2003_HazWaste Identification Form.pdf Q50_1999-11-08_DEQ_HazWaste Notification.pdf Q50_2002-02-25_DEQ_HazWaste CEG.pdf Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf Q50_2003-12-24_Bidwell_HazWaste Pin.pdf
54. Did the owner or operator's facility on each Property ever have "interim status" under the RCRA? If so, and the facility does not currently have interim status; describe the circumstances under which the facility lost interim status.	Not applicable. No application was made for "interim status".	
55. Provide all RCRA Identification Numbers issued to Respondent by EPA or a state for Respondent's operations.	USEPA CEG, ID ORD000013318.	
56. Identify all federal offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.	Hazardous waste information was sent to USEPA's RCRA authorities for a one-time disposal of lead-based paint waste in 2000 (removed prior to demolition of the power plant building). To the best of PGE's knowledge, after reasonable inquiry, reporting under RCRA occurred from 1999 to at least 2003. See the response to Question 53, the documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf and Q21a_HazWasteManifest_Station E_2000.pdf, Q21a_DEQ Hazardous Waste Site Report.pdf) attached in response to Question 21a, and the documents (Q50_1999_HazWaste Registration and Report.pdf, Q50_2000_HazWaste Registration and Report.pdf, Q50_2001_HazWaste Registration and Report.pdf, Q50_2002_HazWaste Registration and Report.pdf, Q50_2003_HazWaste Identification Form.pdf, Q50_1999-11-08_DEQ_HazWaste Notification.pdf, Q50_2002-02-25_DEQ_HazWaste CEG.pdf, Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf, and Q50_2003-12-24_Bidwell_HazWaste Pin.pdf) attached	See Question 21 Attachments Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Q21a_1994-06-01_HazWaste Manifest 01407.pdf Q21a_1994-08-16_HazWaste Manifest 01446.pdf Q21a_1994-08-25_HazWaste Manifest 01408.pdf Q21a_1994-08-30_HazWaste Manifest 01409.pdf Q21a_1994-08-31_HazWaste Manifest 01411.pdf Q21a_1994-08-31_HazWaste Manifest 01412.pdf Q21a_1994-09-08_HazWaste Manifest 01451.pdf

EPA Question	Response	Records/Information Available
	in response to Question 50. Station E currently has CEG status. Information concerning toxic waste/material (PCB-containing material and waste) from Station E Substation was filed under TSCA in 1994 and 2004. The USEPA ID ORD980665376, listed on the hazardous waste manifests (Q21a_1994-06-01_HazWaste Manifest 01407.pdf, Q21a_1994-08-16_HazWaste Manifest 01446.pdf, Q21a_1994-08-25_HazWaste Manifest 01408.pdf, Q21a_1994-08-30_HazWaste Manifest 01409.pdf, Q21a_1994-08-31_HazWaste Manifest 01411.pdf, Q21a_1994-08-31_HazWaste Manifest 01412.pdf, Q21a_1994-09-08_HazWaste Manifest 01451.pdf, Q21a_1994-09-09_HazWaste Manifest 01452.pdf, Q21a_1994-09-14_HazWaste Manifest 01453.pdf, Q21a_1994-09-21_HazWaste Manifest 01454.pdf, and Q21a_2004-10-04_HazWaste Manifest.pdf) attached in response to Question 21a, is for PSC, a PGE waste and used materials handling facility used for interim storage of waste prior to disposal/recycling. Hazardous materials from Station E Substation may have also been disposed after interim storage at a PGE waste and used materials handling facility (e.g., PSC, Sellwood Substation, Harborton Substation, and Wilsonville). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and used materials handling facility, as well as the supplemental submittal of documentation from other facilities that may have received waste and used materials from Station E Substation (Supplemental Submittal S7).	Q21a_1994-09-09_HazWaste Manifest 01452.pdf Q21a_1994-09-14_HazWaste Manifest 01453.pdf Q21a_1994-09-21_HazWaste Manifest 01454.pdf Q21a_2004-10-04_HazWaste Manifest.pdf Also see Question 50 Attachments Q50_1999_HazWaste Registration and Report.pdf Q50_2000_HazWaste Registration and Report.pdf Q50_2001_HazWaste Registration and Report.pdf Q50_2002_HazWaste Registration and Report.pdf Q50_2003_HazWaste Identification Form.pdf Q50_1999-11-08_DEQ_HazWaste Notification.pdf Q50_2002-02-25_DEQ_HazWaste CEG.pdf Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf Q50_2003-12-24_Bidwell_HazWaste Pin.pdf
57. Identify all state offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.	RCRA hazardous waste information was sent to the Oregon DEQ for a one-time disposal of lead-based paint waste in 2000 (removed prior to demolition of the power plant building). To the best of PGE's knowledge, after reasonable inquiry, reporting to the Oregon DEQ occurred from 1999 to at least 2003. See the documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf and Q21a_HazWasteManifest_Station E_2000.pdf, Q21a_DEQ Hazardous Waste Site Report.pdf) attached in response to Question 21a, and the documents (Q50_1999_HazWaste Registration and Report.pdf, Q50_2000_HazWaste Registration and Report.pdf, Q50_2001_HazWaste Registration and Report.pdf, Q50_2002_HazWaste Registration and Report.pdf, Q50_2003_HazWaste Identification Form.pdf, Q50_1999-11-08_DEQ_HazWaste Notification.pdf, Q50_2002-02-25_DEQ_HazWaste CEG.pdf, Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf, and Q50_2003-12-24_Bidwell_HazWaste Pin.pdf) attached in response to Question 50. Station E currently has CEG status. Fire marshal HSIS records from 1991-2009 for all PGE properties, including multiple substations (combined) both within and outside of the Investigation Area, were sent to the Oregon State Fire Marshal and are provided in a supplemental submittal (Supplemental Submittal S9). Hazardous materials from Station E Substation may have also been disposed after interim storage at a PGE waste and used materials handling facility (e.g., PSC, Sellwood Substation, Harborton Substation, and Wilsonville). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and used materials handling facility, as well as the supplemental submittal of documentation from other facilities	See Question 21 Attachments Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Also see Question 50 Attachments Q50_1999_HazWaste Registration and Report.pdf Q50_2000_HazWaste Registration and Report.pdf Q50_2001_HazWaste Registration and Report.pdf Q50_2002_HazWaste Registration and Report.pdf Q50_2003_HazWaste Identification Form.pdf Q50_1999-11-08_DEQ_HazWaste Notification.pdf Q50_2002-02-25_DEQ_HazWaste CEG.pdf Q50_2003-5-29_DEQ_HazWaste Status Filing.pdf Q50_2003-12-24_Bidwell_HazWaste Pin.pdf

EPA Question	Response	Records/Information Available
	that may have received waste and used materials from Station E Substation (Supplemental Submittal S7).	
58. List all federal and state environmental laws and regulations under which Respondent has reported federal or state governments, including but not limited to: Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq., (TSCA); Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Sections 1101 et seq., (EPCRA); and the Clean Water Act (the Water Pollution Prevention and Control Act), 33 U.S.C. Sections 1251 et seq., Oregon Hazardous Substance Remedial Action Law, ORS 465.315, Oregon Water Quality law, ORS Chapter 468(b), Oregon Hazardous Waste and Hazardous Materials law, ORS Chapters 465 and 466, or Oregon Solid Waste law, ORS Chapter 459. Provide copies of each report made, or if only oral reporting was required, identify the federal and state offices to which such report was made.	The federal and state environmental laws and regulations under which PGE has reported to federal and state governments for Station E Substation include TSCA, EPCRA, RCRA, Oregon Hazardous Substance Remedial Action Law, Oregon Hazardous Waste and Hazardous Materials Law, Oregon Solid Waste Law, and the state fire code. See the reports (Q15_UST Removal and Remediation 1995.pdf and Q15_2005 Site Investigation - Substation E.pdf)) attached in response to Question 15, the documents attached in response to Question 21, and the documents attached in response to Question 50.	Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf Also see all Question 21 Attachments Also see all Question 50 Attachments
59. Provide a copy of any registrations, notifications, inspections or reports required by the Toxic Substances Control Act, 15 USC § 2601 et seq., or state law, to be maintained or submitted to any government agency, including fire marshal(s), relating to PCB(s) or PCB(s) containing materials or liquids on any Property identified in response to Question 4.	Annual PCB reports (1978-2008) for PGE (all PGE sites combined) are maintained in compliance with record-reporting rule 40 CFR 761 and are provided in a supplemental submittal (Supplemental Submittal S3).	

EPA Question	Response	Records/Information Available
60. Has Respondent or Respondent's contractors, lessees, tenants, or agents ever contacted, provided notice to, or made a report to the Oregon Department of State Lands ("DSL") or any other state agency concerning an incident, accident, spill, release, or other event involving Respondent's leased state aquatic lands? If so, describe each incident, accident, spill, release, or other event and provide copies of all communications between Respondent or its agents and DSL or the other state agency and all documents that were exchanged between Respondent, its agents and DSL or other stale agency.	To the best of PGE's knowledge, after reasonable inquiry, no. The Station E Substation is not adjacent to the Willamette River. For any potential DSL reporting concerning the historical pump house located over the Willamette River adjacent to the 2700 NW Front Avenue property, see the 2700 NW Front Avenue property 104(e) response.	
61. Describe all notice or reporting requirements to DSL that you had under an aquatic lands lease or state law or regulation regarding incidents affecting, or activities or operations occurring on leased aquatic lands. Include the nature of the matter required to be reported and the office or official to whom the notice or report went to. Provide copies of all such notices or reports.	To the best of PGE's knowledge, after reasonable inquiry, none. The Station E Substation is not adjacent to the Willamette River. For any potential DSL reporting requirements concerning the historical pump house located over the Willamette River adjacent to the 2700 NW Front Avenue property, see the 2700 NW Front Avenue property 104(e) response.	
Section 6.0 - Releases and Remediation		
62. Identify all leaks, spills, or releases into the environment of any waste, including petroleum, hazardous substances, pollutants, or contaminants, that have occurred at or from each Property, which includes any aquatic	The attached documents provide information describing, to the best of PGE's knowledge, after reasonable inquiry, the leaks, spills, or releases into the environment at Station E Substation. Also see the response and reports (Q15_UST Removal and Remediation 1995.pdf and Q15_2005 Site Investigation - Substation E.pdf) attached for Question 15. The following presents a summary: • May 8, 1987 – Approximately 1 gallon of PCB-containing (75 ppm) regulator oil spilled	Question 62 Attachments Q62_05-08-1987_Oil Spill Questionaire.pdf Q62_12-28-1993_Oil Spill Questionaire.pdf Q62_05-20-2003_Discharge Worksheet.pdf Q62_08-28-2003_Discharge Worksheet.pdf Q62_11-16-2004_Discharge Worksheet.pdf

EPA Question	Response	Records/Information Available
lands owned or leased by Respondent. In addition, identify and provide copies of any documents regarding: a. when such releases occurred; b. how the releases occurred (e.g. when the substances were being stored, delivered by a vendor, transported or transferred (to or from any tanks. drums, barrels, or recovery units). and treated); c. the amount of each hazardous substances, pollutants, or contaminants so released; d. where such releases occurred; e. any and all activities undertaken in response to each such release or threatened release, including the notification of any agencies or governmental units about the release; f. any and all investigations of the circumstances, nature, extent or location of each release or threatened release including, the results of any soil, water (ground and surface), or air testing undertaken; g. all persons with information relating to these releases; and h. list all local, state, or federal departments or agencies notified of the release, if applicable;	on the soil/gravel behind the 8-foot fence within Station E East; see the attached document (Q62_05-08-1987_Oil Spill Questionaire.pdf). The spill was reported to the PGE System Control Center, contained, and cleaned up. To the best of PGE's knowledge, after reasonable inquiry, the PCB- and petroleum hydrocarbon-containing soil and gravel were likely disposed of at the Arlington Landfill after interim storage at a PGE waste and used materials handling facility. • 1993/1994 – As part of the Station E East enlargement and upgrading that commenced in 1993, PGE decided to remove the three previously decommissioned USTs (560-, 1,520-, and 2,140-barrel) at Station E East. During the initial phase of the removal of the three USTs, PGE discovered that the contents of the USTs had leaked into the surrounding soil. The release was reported to PGE System Control Center and the Oregon DEQ; see the attached document (Q62_12-28-1993_Oil Spill Questionaire.pdf), as well as the initial soil analytical data (Q15_1993-12-29.pdf) attached in response to Question 15. The February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15, summarizes the assessment and remediation. The approximately 30,000 gallons of oily water from the 2,140-barrel UST were sent to Sunwest Energy Inc, the approximately 140 tons of petroleum hydrocarbon-containing solidified contents of the 2,140-barrel UST were sent to Columbia Ridge Landfill, the 64,200 lbs of UST steel not covered in oil were sent to Schnitzer Steel, the UST steel covered in oil was sent to Hillsboro Landfill, and the approximately 2,000 gallons of petroleum hydrocarbon-containing solidified contents from the 1,520-barrel and 560-barrel USTs and the approximately 5,145 tons of petroleum hydrocarbon-containing soil were sent to Oregon Hydrocarbon/TPS Technologies; see Appendices D and E of the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, as well as the TPS certificate of soil recycling (Q21a_1994 TPS Soil Recycling Cert.pdf) attached in response to Question 21a. • 2003/2004 - PGE conducted a voluntary site investigation of Station E East; see the August 2005 Station E Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. During the site investigation, a fourth previously decommissioned UST (2,140-barrel) was located at Station E East and PGE discovered that the contents of the UST had leaked into the surrounding soil. In early 2004, the fourth UST's steel liner, UST contents, and approximately 1,280 tons of surrounding petroleum hydrocarbon-containing soils were removed. The steel liner was sent to Schnitzer Steel, the UST contents (approximately 8,850 gallons of oil water, 6,900 gallons of oil, and 10 drums of solids) were sent to Emerald Services, a small quantity of water from rain during the excavation of the petroleum hydrocarbon-containing soil was sent to PSC for disposal with vault water from other PGE properties, and the approximately 1,280 tons of petroleum hydrocarbon soil were sent to Hillsboro Landfill; see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15, particularly	Also see Question 15 Attachments Q15_2005 Site Investigation - Substation E.pdf Q15_UST Removal and Remediation 1995.pdf Q15_1993-12-29.pdf Also see Question 21 Attachments Q21a_1994 TPS Soil Recycling Cert.pdf Q21a_Station E East_WAL_02-2004.pdf Q21a_Station E East_WAL_09-12-2003.pdf Q21a_2004 Hillsboro Landfill Tickets.pdf Q21a_2004 Concrete.pdf Q21a_Station E_NH WAL_05-22-2003.pdf Q21a_Station E_NH WAL_09-30-2003.pdf Q21a_Station E East_WAL_11-29-2004.pdf

EPA Question	Response	Records/Information Available
	Appendices G and H. Also see the documents (Q21a_Station E East_WAL_02-2004.pdf, Q21a_Station E East_WAL_09-12-2003.pdf, Q21a_2004 Hillsboro Landfill Tickets.pdf, and Q21a_2004 Concrete.pdf) attached in response to Question 21a. • May 20, 2003 – Approximately 1 gallon of hydraulic oil from a trackhoe spilled on the gravel within Station E East; see the attached document (Q62_05-20-2003_Discharge Worksheet.pdf). The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 25 square feet of petroleum hydrocarbon-containing gravel were disposed of at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the document (Q21a_Station E_NH WAL_05-22-2003.pdf) attached in response to Question 21a. • August 28, 2003 – Approximately 2 gallons of hydraulic oil from a PGE truck were spilled on the gravel within Station E West; see the attached document (Q62_08-28-2003_Discharge Worksheet.pdf). The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 300 square feet of petroleum hydrocarbon-containing gravel were disposed of at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the document (Q21a_Station E_NH WAL_09-30-2003.pdf) attached in response to Question 21a. • November 16, 2004 – Approximately 0.5 gallon of diesel fuel from a Bobcat (mini hoe truck) spilled on the soil/gravel within Station E West during construction activities; see the attached document (Q62_11-16-2004_Discharge Worksheet.pdf). The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 9 square feet of petroleum hydrocarbon-containing soil/gravel (with < 0.2 ppm PCBs) were disposed of at Hillsboro Landfill; see the document (Q21a_Station E East_WAL_11-29-2004.pdf) attached in response to Question 21a. For information concerning other remedial activities at Station E Substation, not related to specific releases/spills, see the response to Questions 15, 21, and 64.	
63. Was there ever a spill, leak, release or discharge of waste, including petroleum, or hazardous substances, pollutant or contaminant into any subsurface disposal system or floor drain inside or under a building on the Property? If the answer to the preceding question is anything but an unqualified "no", identify:	There were floor drains and lavatories located within the Station E power plant building until at least 1975. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if they were connected to the City of Portland's sewer system. The power plant was not used after 1953 and all structures and foundations were removed by 2000. No drains are currently present on the property. To the best of PGE's knowledge, after reasonable inquiry, no waste disposal or spills, leaks, releases, or discharges of waste occurred into the historical drains at the Station E Substation. Documented leaks, releases, and spills are addressed in the response to Question 62.	

EPA Question	Response	Records/Information Available
a. where the disposal system or floor drains were located; b. when the disposal system or floor drains were installed; c. whether the disposal system or floor drains were connected to pipes; d. where such pipes were located and emptied; e. when such pipes were installed; f. how and when such pipes were replaced. or repaired; and g. whether such pipes ever leaked or in any way released such waste or hazardous substances into the environment.		
64. Has any contaminated soil ever been excavated or removed from the Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify and provide copies of any documents regarding:		
a. amount of soil excavated;	In 1993, PGE commenced enlarging and upgrading the Station E Substation. As part of the enlargement and upgrading, PGE assessed the contents of three previously decommissioned USTs (560-, 1,520-, and 2,140-barrel) at Station E East and discovered that their contents had leaked into the surrounding soil. PGE decided to remove the USTs and remediate (remove) approximately 5,145 tons of the surrounding petroleum hydrocarbon-containing soil in 1993/1994; see the February 1995 UST Removal and Remediation (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15, and the document (Q62_12-28-1993_Oil Spill Questionaire.pdf) attached in response to Question 62. The approximately 5,145 tons of petroleum hydrocarbon-containing soil were sent to Oregon Hydrocarbon/TPS Technologies; see Appendix E of the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, as well as the TPS certificate of soil recycling (Q21a_1994 TPS Soil Recycling Cert.pdf) attached in response to Question 21a. During the enlarging and upgrading of Station E Substation, PGE also characterized the soil/gravel and concrete at Station E East and Station E West for potential PCB contamination. The characterization of the soil identified locations of PCB contamination. In 1994, PGE	See Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_12-08-2003 Norton - SI Work Plan.pdf Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf Q15_2005 Site Investigation - Substation E.pdf Q15_1993-12-29.pdf Q15_1994-04-18.pdf Q15_1994-05-04.pdf Q15_1994-06-07.pdf Q15_1994-09-02.pdf Q15_1994-09-09b.pdf Q15_1994-09-15a.pdf Q15_1994-09-15b.pdf Q15_1996-01-23.pdf Q15_1996-03-28.pdf Q15_2000-09-22.pdf

EPA Question	Response	Records/Information Available
	remediated (removed) and disposed of approximately 170,000 kg (18.7 tons) of petroleum hydrocarbon- and PCB-containing soil/gravel from Station E East and Station E West at the Arlington Landfill; see the hazardous waste manifests (Q21a_1994-06-01_HazWaste Manifest 01407.pdf, Q21a_1994-08-25_HazWaste Manifest 01408.pdf, Q21a_1994-08-30_HazWaste Manifest 01409.pdf, Q21a_1994-08-30_HazWaste Manifest 01410.pdf, Q21a_1994-08-31_HazWaste Manifest 01411.pdf, Q21a_1994-08-31_HazWaste Manifest 01412.pdf, Q21a_1994-09-08_HazWaste Manifest 01451.pdf, Q21a_1994-09-09_HazWaste Manifest 01452.pdf, Q21a_1994-09-14_HazWaste Manifest 01453.pdf, and Q21a_1994-09-21_HazWaste Manifest 01454.pdf) attached in response to Question 21a. In 1999/2000, PGE removed the remaining Station E power plant building structures and foundations, as well as surrounding petroleum hydrocarbon-containing soils. In preparation for the building demolition, the building was sand-blasted to remove lead-based paint. In February 2000, the lead-based paint waste (paint chips, soil, PPE, and filters) was disposed of at the Arlington Landfill; see the documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf, Q21a_HazWasteManifest_Station E_2000.pdf, and Q21a_DEQ Hazardous Waste Site Report.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q52_09.pdf) attached in response to Question 52, the approximately 1,500 cubic yards of petroleum hydrocarbon-containing soil and demolition debris were likely disposed at the Hillsboro Landfill. In 2003, PGE conducted a voluntary site investigation of Station E East; see the August 2005 Station E Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. During the site investigation, a fourth UST (2,140-barrel) was located at Station E East and PGE discovered that its contents had leaked into the surrounding soil. In early 2004, the fourth UST's steel liner, UST contents, and approximately 1,280 tons of surrounding petroleum hydrocarbon-containing soils were removed. The approximately 1,280 tons of petroleum hydrocarbon soil were sent to Hillsboro Landfill for disposal; see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15, particularly Appendix G. Also see the documents (Q21a_Station E East_WAL_02-2004.pdf, Q21a_Station E East_WAL_09-12-2003.pdf and Q21a_2004 Hillsboro Landfill Tickets.pdf) attached in response to Question 21a. Soil and gravel removed from PGE properties during site excavations (from site upgrades, construction, or equipment spill response) are tested (for petroleum-hydrocarbon and/or PCB contamination) and disposed of appropriately, as needed. See the attached 2006 non-hazardous waste approval letter (Q21a_Station E West_WAL_11-16-2006.pdf) from site construction, as well as the disposal permits attached in response to Question 52. The following presents a summary of available information with respect to specific releases that have occurred at the Station E Substation (other than the remediation activities already discussed, above): • May 8, 1987 – Approximately 1 gallon of PCB-containing (75 ppm) regulator oil spilled	Q15_2001-1-25a.pdf Q15_2001-1-25b.pdf Q15_2002-12-26.pdf Q15_2003-1-3.pdf Q15_2003-2-5.pdf Q15_2003-02-13.pdf Q15_2003-07-01a.pdf Q15_2003-07-01b.pdf Q15_2003-09-04.pdf Q15_2003-9-11.pdf Q15_2004-2-11.pdf Q15_2004-08-23.pdf Q15_2004-11-17.pdf Q15_2005-3-2.pdf Q15_2006-9-11.pdf Also see Question 21 Attachments Q21a_2004 Hillsboro Landfill Tickets.pdf Q21a_Station E East_WAL_02-2004.pdf Q21a_Station E East_WAL_09-12-2003.pdf Q21a_Station E East_WAL_11-29-2004.pdf Q21a_Station E West_WAL_11-16-2006.pdf Q21a_Station E_NH WAL_05-22-2003.pdf Q21a_Station E_NH WAL_09-30-2003.pdf Q21a_1994 TPS Soil Recycling Cert.pdf Q21a_1994-06-01_HazWaste Manifest 01407.pdf Q21a_1994-08-25_HazWaste Manifest 01408.pdf Q21a_1994-08-30_HazWaste Manifest 01409.pdf Q21a_1994-08-30_HazWaste Manifest 01410.pdf Q21a_1994-08-31_HazWaste Manifest 01411.pdf Q21a_1994-08-31_HazWaste Manifest 01412.pdf Q21a_1994-09-08_HazWaste Manifest 01451.pdf Q21a_1994-09-09_HazWaste Manifest 01452.pdf Q21a_1994-09-14_HazWaste Manifest 01453.pdf Q21a_1994-09-21_HazWaste Manifest 01454.pdf Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Also see all Question 52 Attachments Also see all Question 62 Attachments

EPA Question	Response	Records/Information Available
	on the soil/gravel behind the 8-foot fence within Station E East; see the document (Q62_05-08-1987_Oil Spill Questionaire.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. To the best of PGE's knowledge, after reasonable inquiry, the PCB- and petroleum hydrocarbon-containing soil and gravel were likely disposed of at the Arlington Landfill after interim storage at a PGE waste and used materials handling facility. • May 20, 2003 – Approximately 1 gallon of hydraulic oil from a trackhoe spilled on the gravel within Station E East; see the document (Q62_05-20-2003_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 25 square feet of petroleum hydrocarbon-containing gravel were disposed of at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the document (Q21a_Station E_NH WAL_05-22-2003.pdf) attached in response to Question 21a. • August 28, 2003 – Approximately 2 gallons of hydraulic oil from a PGE truck spilled on the gravel within Station E West; see the document (Q62_08-28-2003_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 300 square feet of petroleum hydrocarbon-containing gravel were disposed of at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the document (Q21a_Station E_NH WAL_09-30-2003.pdf) attached in response to Question 21a. • November 16, 2004 – Approximately 0.5 gallon of diesel fuel from a Bobcat (mini hoe truck) spilled on the soil/gravel within Station E West during construction activities; see the document (Q62_11-16-2004_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 9 square feet of petroleum hydrocarbon-containing soil/gravel (with < 0.2 ppm PCBs) were disposed of at Hillsboro Landfill; see the document (Q21a_Station E East_WAL_11-29-2004.pdf) attached in response to Question 21a. See the response and documents attached for Questions 15, 21, 52, and 62. Also see the annual PCB reports for PGE (all PGE sites combined) provided in a supplemental submittal (Supplemental Submittal S3).	
b. location of excavation presented on a map or aerial photograph;	Petroleum hydrocarbon-containing soil removed in 1993/1994, in 1999/2000, and in 2004 is shown on Figures 3, 9, and 12 of the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf), attached in response to Question 15. In addition to the soil excavation areas shown on this figure, the stack house foundation was removed in 1999/2000. PCB-containing soil was removed from around the oil-filled equipment in 1994; see the maps in the documents (Q15_1994-04-18.pdf and Q15_1994-05-04.pdf) attached in response to	See Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf Q15_1994-04-18.pdf Q15_1994-05-04.pdf

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	Question 15. To the best of PGE's knowledge, after reasonable inquiry, there are no maps, photographs, or figures that depict the locations of the other contaminated soil and/or gravel removed from the Station E Substation that are discussed in Question 64a above.	
c. manner and place of disposal and/or storage of excavated soil;	See the response to Question 64a.	
d. dates of soil excavation;	See the response to Question 64a.	
e. identity of persons who excavated or removed the soil, if other than a contractor for Respondent;	Soil and gravel have been excavated from Station E Substation by contractors/consultants (EMCON Inc, Bridgewater Group Inc, and Hahn and Associates Inc) and by personnel from PGE's EM&C construction department. The PGE EM&C construction department foremen include Dan Loftin and Tim Danchok; other PGE EM&C personnel have changed over time.	
f. reason for soil excavation;	Soil excavation at the Station E Substation has occurred from site investigation remediation activities, construction activities, and in response to equipment spills.	
g. whether the excavation or removed soil contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the soil contained, and why the soil contained such constituents;	See the response to Question 64a, which includes the available information on types of constituents contaminating the soil and gravel, and why the soil and gravel contained those constituents.	
h. all analyses or tests and results of analyses of the soil that was removed from the Property;	See the response to Question 64a. For soil analytical data/results, see the reports (Q15_UST Removal and Remediation 1995.pdf, Q15_12-08-2003 Norton - SI Work Plan.pdf, Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf, and Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15 and the soil excavation and confirmation lab reports (Q15_1993-12-29.pdf, Q15_1994-04-18.pdf, Q15_1994-05-04.pdf, Q15_1994-06-07.pdf, Q15_1994-09-02.pdf, Q15_1994-09-09b.pdf, Q15_1994-09-15a.pdf, Q15_1994-09-15b.pdf, Q15_1996-01-23.pdf, Q15_1996-03-28.pdf, Q15_2000-09-22.pdf, Q15_2001-1-25a.pdf, Q15_2001-1-25b.pdf, Q15_2002-12-26.pdf, Q15_2003-1-3.pdf, Q15_2003-2-5.pdf, Q15_2003-02-13.pdf, Q15_2003-07-01a.pdf, Q15_2003-07-01b.pdf, Q15_2003-09-04.pdf, Q15_2003-9-11.pdf, Q15_2004-2-11.pdf, Q15_2004-08-23.pdf, Q15_2004-11-17.pdf, Q15_2005-3-2.pdf, Q15_2006-9-11.pdf) attached in response to Question 15. Also see the documents (Q21a_Station E East_WAL_09-12-2003.pdf, Q21a_Station E East_WAL_11-29-2004.pdf, and Q21a_Station E West_WAL_11-16-2006.pdf) attached in response to Question 21a.	See Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_12-08-2003 Norton - SI Work Plan.pdf Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf Q15_2005 Site Investigation - Substation E.pdf Q15_1993-12-29.pdf Q15_1994-04-18.pdf Q15_1994-05-04.pdf Q15_1994-06-07.pdf Q15_1994-09-02.pdf Q15_1994-09-09b.pdf Q15_1994-09-15a.pdf Q15_1994-09-15b.pdf Q15_1996-01-23.pdf Q15_1996-03-28.pdf Q15_2000-09-22.pdf Q15_2001-1-25a.pdf Q15_2001-1-25b.pdf Q15_2002-12-26.pdf Q15_2003-1-3.pdf Q15_2003-2-5.pdf Q15_2003-02-13.pdf Q15_2003-07-01a.pdf Q15_2003-07-01b.pdf

EPA Question	Response	Records/Information Available
		Q15_2003-09-04.pdf Q15_2003-9-11.pdf Q15_2004-2-11.pdf Q15_2004-08-23.pdf Q15_2004-11-17.pdf Q15_2005-3-2.pdf Q15_2006-9-11.pdf Also see Question 21 Attachments Q21a_Station E East_WAL_09-12-2003.pdf Q21a_Station E East_WAL_11-29-2004.pdf Q21a_Station E West_WAL_11-16-2006.pdf
i. all analyses or tests and results of analyses of the excavated area after the soil was removed from the Property; and	In general, spills are cleaned up to remove all visible contamination plus 1 foot laterally. Confirmation sampling was done for the 1994 excavation of PCB-containing soil; see the response to Question 64h.	
j. all persons, including contractors, with information about (a) through (i) of this request.	Multiple individuals have had authority within PGE to access and conduct activities on the Station E Substation. They are listed on documents attached in response to Question 6g. Also see the documents attached in response to Question 38, for PGE personnel responsible for environmental matters from 1980 to the present. Some soil removals were performed by personnel from PGE's EM&C construction department. The PGE EM&C construction department foremen include Dan Loftin and Tim Danchok; other PGE EM&C personnel have changed over time. In addition, the contractors/consultants identified in response to Question 6b may also have information relevant to this request. Please also see the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf), attached in response for Question 15, the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf), attached in response for Question 15, and documents attached in response to Question 21.	See Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_2005 Site Investigation - Substation E.pdf Also see all Question 21 Attachments Also see all Question 38 Attachemnts
65. Have you ever tested the groundwater under your Property? If so, please provide copies of all data, analysis, and reports generated from such testing.	Yes. A site investigation, which included groundwater sampling, was completed for the Site in 2003/2004. Please see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response for Question 15.	See Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf
66. Have you treated, pumped, or taken any kind of response action on groundwater under your Property? Unless the answer to the preceding	No. Although groundwater sampling was conducted for the remedial investigation in 2004, PGE has not treated, pumped, or taken any kind of response action on groundwater under Station E Substation; see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response for Question 15). The site investigation concluded that further evaluation of groundwater was not warranted.	See Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf Also see Question 50 Attachment Q50_12-06-2006 Norton.pdf

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question is anything besides an unequivocal "no", identify: a. reason for groundwater action; b. whether the groundwater contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the groundwater contained, and why the groundwater contained such constituents; c. all analyses or tests and results of analyses of the groundwater; d. if the groundwater action has been completed, describe the basis for ending the groundwater action; and e. all persons, including contractors, with information about (a) through (c) of this request.	On 1 March 2006, the Oregon DEQ sent a Source Control Decision to the USEPA, which stated that the site (Station E Substation) is not a current or reasonably likely future source of contamination to the Willamette River and that no source control measures are required; see the document (Q50_2006-03-01 DEQ Source Control Decision.pdf) attached in response to Question 50. The site received a No Further Action determination by Oregon DEQ on 6 December 2006 for the UST cleanup actions; see the document (Q50_12-06-2006 Norton.pdf) attached in response to Question 50.	Q50_2006-03-01 DEQ Source Control Decision.pdf
67. Was there ever a spill, leak, release or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river? If the answer to the preceding question is anything but an unqualified "no", identify: a. the nature of the hazardous substance, waste, or material spilled, leaked, released or discharged; b. the dates of each such occurrence; c. the amount and location of such release; d. were sheens on the river created by the release;	To the best of PGE's knowledge, after reasonable inquiry, no. The Station E Substation is not on, over, or directly adjacent to the Willamette River. To the best of PGE's knowledge, after reasonable inquiry, there has never been a spill, leak, release, or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river at the Station E Substation.	

EPA Question	Response	Records/Information Available
e. was there ever a need to remove or dredge any solid waste, bulk product, or other material from the river as a result of the release? If so, please provide information and description of when such removal/dredging occurred, why, and where the removed/dredged materials were disposed.		
68. For any releases or threatened releases of PCB(s), identify the date, quantity, location and type of PCB(s) or PCB(s) containing materials or liquids, and the nature of any response to or cleanup of the release.	Historical Station C Steam Plant The Station C stream plant generated power from 1901 until 1907. Power was generated by burning wood waste. The plant was decommissioned in 1912/1913. The Station C steam plant ceased operations prior to the generalized marketing of PCBs in the United States starting in 1929. Historical Station E Power Plant The Station E power plant generated power from 1905 until 1953. Power was generated by burning oil, wood waste, and coal. Historical equipment at the power plant, including AB transformers, may have contained oil with PCBs. Fuel oil was stored on site in the four USTs. The primary materials that may have been used for equipment maintenance include transformer oil (may have contained PCBs), solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid, and paint. In 1953, the Station E power plant was placed on "cold stand-by service" and, after being idle for 15 years, the power plant was retired in 1968. Sometime between 1968 and 1977, when the eastern half of the building was razed, the equipment was removed from the Site. Furthermore, samples collected during the 1993/1994 UST removal and remediation and in 1999 did not detect chlorinated solvents (including PCBs) in or near the former USTs or from histyorical power plant operations. See the document (Q15_UST Removal and Remediation 1995.pdf) attached in response for Question 15 and the document (Q50_06-07-2006 Gainer.pdf) attached in response to Question. Substation Operations and Recent Remedial Activities In general, PGE replaces PCB-containing or potentially PCB-contaminated equipment (e.g., transformers, capacitors, lamp ballasts, circuit breakers, bushings, and step regulators) with non-PCB oil containing equipment (< 50 ppm PCBs) as they are removed from service. The majority of PCB-containing capacitors at Station E Substation were changed out with non-PCB containing capacitors (< 1 ppm) in 1994; see the document (Q21a_1994-08-16_HazWaste Manifest 01446.pdf) attached in response to Question 21a. Some time between 2003 and 2004, the PCB-containing oil was drained out of the large PCB-containing transformer (Transformer 10474) at Station E West and replaced with non-PCB-containing oil; see the document (Q21a_2004-10-04_HazWaste Manifest.pdf) attached in response to Question 21a. The primary materials that may have been used for equipment maintenance include dielectric	See Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_1994-04-18.pdf Q15_1994-04-26.pdf Q15_1994-05-04.pdf Q15_1994-06-07.pdf Q15_1994-09-01.pdf Q15_1994-09-02.pdf Q15_1994-09-09a.pdf Q15_1994-09-09b.pdf Q15_1994-09-15a.pdf Q15_1994-09-15b.pdf Also see Question 21 Attachments Q21a_2009_Oil Filled Equipment.pdf Q21a_1986-11-07_Oil Filled Equipment.pdf Q21a_1986-12-10_Transport of Capacitors.pdf Q21a_1988-08-23_Transport of Capacitors.pdf Q21a_1999-11-23.pdf Q21a_1994-06-01_HazWaste Manifest 01407.pdf Q21a_1994-08-25_HazWaste Manifest 01408.pdf Q21a_1994-08-30_HazWaste Manifest 01409.pdf Q21a_1994-08-30_HazWaste Manifest 01410.pdf Q21a_1994-08-31_HazWaste Manifest 01411.pdf Q21a_1994-08-31_HazWaste Manifest 01412.pdf Q21a_1994-08-16_HazWaste Manifest 01446.pdf Q21a_1994-09-08_HazWaste Manifest 01451.pdf Q21a_1994-09-09_HazWaste Manifest 01452.pdf Q21a_1994-09-14_HazWaste Manifest 01453.pdf Q21a_1994-09-21_HazWaste Manifest 01454.pdf Q21a_2004-10-04_HazWaste Manifest.pdf Q21a_Station E East_WAL_11-29-2004.pdf

EPA Question	Response	Records/Information Available
	fluids (oil) and transformer oil, which may have historically contained PCBs. To the best of PGE's knowledge, after reasonable inquiry, other than minor repairs, electrical equipment maintenance was generally not performed on site. Instead, equipment was taken out of service and transported to PGE's waste and used materials handling facility for repairs and retrofitting. See the document (Q21a_2009_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment currently in service at Station E East and Station E West. The document identifies the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. Several pieces of the oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the document (Q21a_1986-11-07_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment at Station E Substation in 1986 and the transformer capacity records provided in a supplemental submittal (Supplemental Submittal S8). Other oil-filled equipment transportation, disposal, and testing documents include: • The document (Q21a_1986-12-10_Transport of Capacitors.pdf) attached in response to Question 21a provides the general transport documents for non-leaking oil-filled capacitors removed from the Station E Substation in 1986. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). • The document (Q21a_1988-08-23_Transport of Capacitors.pdf) attached in response to Question 21a is the general transport document for a failed PCB-containing capacitor removed from the Station E Substation in 1988. This capacitor was picked up for disposal/recycling by ENSCO (now Clean Harbors). • The document (Q21a_1999-11-23.pdf) attached in response to Question 21a provides the PCB analytical results for the transformer oil in four transformers at Station E Substation in 1999. The PCB results were non-detect for all four transformers. Soil, gravel, concrete, and/or water testing has also been conducted, as needed, in conjunction with various improvements/construction, maintenance, and remedial activities at the Site, including in response to equipment spills. This testing has periodically uncovered areas of PCB contamination. When found, these areas were cleaned up and wastes were disposed of properly. According to the document (Q50_06-07-2006 Gainer.pdf) attached in response to Question 50, PCBs have been analyzed in over 90 surface and subsurface soil samples at Station E East; however, PCBs have only been detected above 1 ppm during the mid-1990s in surface soil. No PCBs or petroleum hydrocarbons (including insulating oil) were detected in subsurface soil. The following summarizes excavations of PCB-containing surface soil:	Also see Question 50 Attachment Q50_06-07-2006 Gainer.pdf Also see Question 62 Attachments Q62_05-08-1987_Oil Spill Questionaire.pdf Q62_11-16-2004_Discharge Worksheet.pdf

EPA Question	Response	Records/Information Available
	• On 8 May 1987, approximately 1 gallon of PCB-containing (75 ppm) regulator oil spilled on the soil/gravel behind the 8-foot fence within Station E East; see the document (Q62_05-08-1987_Oil Spill Questionaire.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. To the best of PGE's knowledge, after reasonable inquiry, the PCB- and petroleum hydrocarbon-containing soil and gravel were likely disposed at the Arlington Landfill after interim storage at a PGE waste and used materials handling facility. • During the enlarging and upgrading of Station E Substation, PGE characterized the soil/gravel and concrete at Station E East and Station E West for potential PCB contamination in 1994. The characterization of the soil identified locations of PCB contamination, typically around oil-filled equipment; see the analytical results (Q15_1994-04-18.pdf, Q15_1994-04-26.pdf, Q15_1994-05-04.pdf, Q15_1994-06-07.pdf, Q15_1994-09-01.pdf, Q15_1994-09-02.pdf, Q15_1994-09-09a.pdf, Q15_1994-09-09b.pdf, Q15_1994-09-15a.pdf, and Q15_1994-09-15b.pdf) attached in response to Question 15. In 1994, PGE remediated (removed) approximately 170,000 kg of petroleum hydrocarbon- and PCB-containing soil/gravel from Station E East and Station E West and disposed of it at the Arlington Landfill; see the hazardous waste manifests (Q21a_1994-06-01_HazWaste Manifest 01407.pdf, Q21a_1994-08-25_HazWaste Manifest 01408.pdf, Q21a_1994-08-30_HazWaste Manifest 01409.pdf, Q21a_1994-08-30_HazWaste Manifest 01410.pdf, Q21a_1994-08-31_HazWaste Manifest 01411.pdf, Q21a_1994-08-31_HazWaste Manifest 01412.pdf, Q21a_1994-09-08_HazWaste Manifest 01451.pdf, Q21a_1994-09-09_HazWaste Manifest 01452.pdf, Q21a_1994-09-14_HazWaste Manifest 01453.pdf, and Q21a_1994-09-21_HazWaste Manifest 01454.pdf) attached in response to Question 64. • On 16 November 2004, approximately 0.5 gallon of diesel fuel from a Bobcat (mini hoe truck) spilled on soil and gravel within Station E West during construction activities; see the document (Q62_11-16-2004_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 9 square feet of petroleum hydrocarbon-containing soil and gravel (with < 0.2 ppm PCBs) were disposed of at Hillsboro Landfill; see the document (Q21a_Station E East_WAL_11-29-2004.pdf) attached in response to Question 21a. For further information, see the response and documents attached for Questions 15, 21, 47, and 62. Also see the annual PCB reports (1978-2008) for PGE (all PGE sites combined), which are provided in a supplemental submittal (Supplemental Submittal S3).	
69. For any releases or threatened releases of PCB(s) and/or PCB(s) containing materials or liquids, identify	See the responses to Questions 62 and 68.	

EPA Question	Response	Records/Information Available
and provide copies of any documents regarding the quantity and type of waste generated as a result of the release or threatened release, the disposition of the waste, provide any reports or records relating to the release or threatened release, the response or cleanup and any records relating to any enforcement proceeding relating to the release or threatened release. Provide all documentation regarding, but not limited to, the following releases:		
a. a May 20, 1988 release of 20 gallons of 400 parts per million PCB transformer oil; b. a February 9, 1995 release of 5 gallons of oil that spilled from a bushing on the ground; c. a February 24, 1997 release of 20 gallons of 19 parts per million PCB transformer oil onto the ground, and; d. a July 25, 1997 release of 3 gallons of less than 5 parts per million PCB oil from a break on the ground, and; e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.	Not applicable. Questions 69a through 69e are not relevant to Station E Substation. Information regarding these investigations is provided in the 104(e) response for the Harborton Substation.	
Section 7.0 - Property Investigations		
70. Provide information and documentation concerning all inspections, evaluations, safety audits, correspondence and any other documents associated with the	A loss prevention inspection was conducted by Arkwright Mutual Insurance for the Station E Substation in 1996; see the attached loss prevention report (Q70_E Sub LPR 1996.pdf). In 2007, Factory Mutual Insurance company (FM Global) inspected the Station E Substation for fire and natural hazards; see the attached 2007 report (Q70_FM Global Substation Review.pdf). An engineer from PGE's office of Facilities Management (FM) conducts several inspections a year at most of PGE's locations. The engineer will do a complete walk through each facility looking	Question 70 Attachments Q70_FM Global Substation Review.pdf Q70_E Sub LPR 1996.pdf

EPA Question	Response	Records/Information Available
conditions, practices, and/or procedures at the Property concerning insurance issues or insurance coverage matters.	for fire hazards and will issue a recommendation when a problem is found. Along with these inspections, the fire protection systems and equipment are checked and usually functionally tested. There are locations that are inspected by FM which do not require the issuing of an inspection report. These locations are small substations where there are only pressure vessels located on the system circuit breakers. This inspection is required by the State of Oregon. Following the inspection, the inspector will send his report to the State so they can keep up to date on the condition of our pressure vessels. Copies of PGE's relevant general liability insurance policies are provided in a supplemental submittal (Supplemental Submittal S4).	
71. Describe the purpose for, the date of initiation and completion, and the results of any investigations of soil, water (ground or surface), sediment, geology, and hydrology or air quality on or about each Property. Provide copies of all data, reports, and other documents that were generated by you or a consultant, or a federal or state regulatory agency related to the investigations that are described.	In 1993, PGE commenced enlarging and upgrading the Station E Substation. As part of this effort, PGE assessed the contents of three previously decommissioned USTs at Station E East. Based upon the assessment, PGE decided to remove the USTs and remediate (remove) approximately 5,145 tons of the surrounding petroleum hydrocarbon-containing soil in 1993/1994. The February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15 summarizes the assessment and remediation. Analytical results from the soil and UST water testing conducted during the removal of the three USTs and associated petroleum-impacted soil are located in Appendices A and B of the February 1995 report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, as well as in the documents (Q15_1993-11-24.pdf and Q15_1993-12-29.pdf) attached in response to Question 15. Appendix G of the February 1995 report (Q15_UST Removal and Remediation 1995.pdf), attached in response to Question 15, presents the 1994 geophysical site investigation for Station E East. Also see the document (Q15_1993 Technical Specs for USTs.pdf) attached in response to Question 15, which provides the technical specifications for the removal of the USTs and backfilling. During the enlarging and upgrading of Station E Substation, PGE also characterized the soil/gravel and concrete at Station E East and Station E West for potential PCB contamination. The results from the PCB soil testing (Q15_1994-04-18.pdf, Q15_1994-04-26.pdf, Q15_1994-05-04.pdf, Q15_1994-06-07.pdf, Q15_1994-09-01.pdf, Q15_1994-09-02.pdf, Q15_1994-09-09a.pdf, Q15_1994-09-09b.pdf, Q15_1994-09-15a.pdf, and Q15_1994-09-15b.pdf) are attached in response to Question 15. The characterization of the soil identified locations of PCB contamination. In 1994, PGE remediated (removed) and disposed of approximately 170,000 kg (18.7 tons) of PCB-containing soil and gravel from Station E East and Station E West at the Arlington Landfill; see the response to Question 21. In addition, PGE had Marine & Environmental Testing Inc perform PCB air monitoring during the remediation activities in 1994; see the document (Q15_1994_PCB Air Monitoring Survey.pdf) attached in response to Question 15. In 1999/2000, PGE removed the remaining Station E power plant building structures and foundations, as well as surrounding petroleum hydrocarbon-containing soils. The document (Q15_2000-09-22.pdf) attached in response to Question 15 presents the results from the testing conducted during the removal of the stack house foundation and boiler room, as well as the	See all Question 15 Attachments Also see Question 19 Attachments Q19_Station E East_SPCC Plan.pdf Q19_Station E West_SPCC Plan.pdf Also see Question 50 Attachments Q50_2006-03-01 DEQ Source Control Decision.pdf Q50_06-07-2006 Gainer.pdf Q50_12-06-2006 Norton.pdf Also see all Question 62 Attachments

EPA Question	Response	Records/Information Available
	surrounding petroleum-containing soil. In 2001, the City of Portland encountered petroleum hydrocarbons on the western corner of the former Port of Portland Terminal 1 North property. Sulzer Pumps subsequently encountered petroleum hydrocarbons in the southern corner of their property (southern corner of 2700 NW Front Avenue property, which PGE historically owned). In 2002, Geocon Northwest Inc performed a geophysical site investigation; see the document (Q15_Geocon NorthWest, Inc. P1210-05-02.pdf) attached in response to Question 15. On behalf of PGE, Bridgewater Group Inc in association with Hahn and Associates conducted a voluntary site investigation of Station E East in 2003/2004; see the August 2005 Station E Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. As part of the Station E East site investigation, PGE assessed the extent of COIs within Station E East and along the oil pipeline corridor at the historically PGE-owned 2700 NW Front Avenue property (Sulzer Pumps property). The 2700 NW Front Avenue property is addressed in a separate 104(e) response. During the site investigation, a fourth UST was located at Station E East and sampled in November 2003; see the photographs (Q15_2003 UST Photo Log.pdf) attached in response to Question 15, which document the UST sampling and remediation activities. In early 2004, the UST and surrounding petroleum hydrocarbon-containing soils were removed; see the photographs (Q15_2004 UST Removal Photos.pdf) attached in response to Question 15, which document the UST removal. The August 2005 Station E Site Investigation (Q15_2005 Site Investigation - Substation E.pdf), attached in response to Question 15, includes a discussion/evaluation of the site investigation and UST remediation activities, as well as analytical results from soil and groundwater sampling (located in Appendices B and C). Site investigation field notes (Q15_2004 HAI Field Notes.pdf, Q15_2004 UST Removal Field Notes.pdf, and Q15_2004 Sulzer TP & Station E Stack Field Notes.pdf) are attached in response to Question 15. Additional data from the site investigation are also provided in the documents attached in response to Question 15 (Q15_2004-2-6.pdf, Q15_2004-2-6b.pdf, Q15_2004-08-23.pdf, Q15_2004-2-11.pdf, and Q15_2004-11-17.pdf). Data are also provided in the attached Site Investigation Work Plan documents (Q15_12-8-2003 Norton - SI Work Plan.pdf, Q15_09-16-2004 Gainer - SI Work Plan Addendum.pdf, and Q15_09-27-2004 Gainer - SI WP Addendum-Fig5.pdf) attached in response to Question 15, as well as in the document (Q50_06-07-2006 Gainer.pdf) attached in response to Question 50, which was sent to the Oregon DEQ in response to City of Portland comments on the August 2005 Station E Site Investigation. The August 2005 Station E Site Investigation report concluded that further evaluation of soil and groundwater was not warranted. The report was sent to the Oregon DEQ. On 1 March 2006, the Oregon DEQ sent a Source Control Decision to the USEPA, which stated that Station E Substation is not a current or reasonably likely future source of contamination to the Willamette River and that no source control measures are required; see the document (Q50_2006-03-01 DEQ Source Control Decision.pdf) attached in response to Question 50. The Oregon DEQ issued PGE a No Further Action determination on 6 December 2006 for Station E East; see the	

EPA Question	Response	Records/Information Available
	document (Q50_12-06-2006 Norton.pdf) attached in response to Question 50. In 2002, PGE had GeoEngineers Inc perform a geotechnical evaluation to upgrade a power pole at Station E West (just outside of the Station E West security fence along NW Nicolai Street); see the report (Q15_Geotechnical Report January 2002.pdf) attached in response to Question 15. In 2004, PGE had Geocon Northwest Inc perform a geotechnical evaluation for the installation of a new concrete security wall; see the report (Q15_Geocon NorthWest, Inc. P1210-05-01.pdf) attached in response to Question 15. Soil/gravel/concrete and water testing have also been conducted, as needed, in conjunction with various improvements/maintenance activities at the Site, as well as in response to equipment spills. See the data from various improvements/maintenance activities (Q15_1996-01-23.pdf, Q15_1996-03-28.pdf, Q15_1996-07-31.pdf, Q15_1996-08-07.pdf, Q15_1998-01-09.pdf, Q15_1999-10-22.pdf, Q15_2001-1-25a.pdf, Q15_2001-1-25b.pdf, Q15_2001-05-22.pdf, Q15_2002-12-26.pdf, Q15_2003-1-3.pdf, Q15_2003-2-5.pdf, Q15_2003-02-13.pdf, Q15_2003-07-01a.pdf, Q15_2003-07-01b.pdf, Q15_2003-09-04.pdf, Q15_2003-9-11.pdf, Q15_2005-3-2.pdf, and Q15_2006-9-11.pdf) attached in response to Question 15. Also see the spill documents attached in response to Question 62. For information regarding the disposal of wastes and materials, see the response to Question 21. The SPCC Plans (Q19_Station E East_SPCC Plan.pdf and Q19_Station E West_SPCC Plan.pdf), attached in response to Question 19, briefly describe topography and soil conditions at Station E Substation.	
a. a May 20, 1988 release of 20 gallons of 400 parts per million PCB transformer oil; b. a February 9, 1995 release of 5 gallons of oil that spilled from a bushing on the ground; c. a February 24, 1997 release of 20 gallons of 19 parts per million PCB transformer oil onto the ground, and; d. a July 25, 1997 release of 3 gallons of less than 5 parts per million PCB oil from a break on the ground, and; e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton	Not applicable. Questions 71a through 71e are not relevant to Station E Substation. Information regarding these investigations is provided in the 104(e) response for Harborton Substation.	

EPA Question	Response	Records/Information Available
substation.		
72. Describe any remediation or response actions you or your agents or consultants have ever taken on each Property either voluntarily or as required by any state or federal agency. If not otherwise already provided under this Information Request, provide copies of all investigations, risk assessments or risk evaluations, feasibility studies, alternatives analysis, implementation plans, decision documents, monitoring plans, maintenance plans, completion reports, or other document concerning remediation or response actions taken on each Property.	To the best of PGE's knowledge, after reasonable inquiry, the following presents a summary of remedial activities at the site: • The Station E Substation USTs were decommissioned in-place in approximately 1968 by removing the contents and filling the USTs with sand, slurry, or water; see Page 1-1 of the document (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15. • May 8, 1987 – Approximately 1 gallon of PCB-containing (75 ppm) regulator oil spilled on the soil/gravel behind the 8-foot fence within Station E East; see the document (Q62_05-08-1987_Oil Spill Questionaire.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. To the best of PGE's knowledge, after reasonable inquiry, the PCB- and petroleum hydrocarbon-containing soil/gravel were likely disposed at the Arlington Landfill after interim storage at a PGE waste and used materials handling facility. • 1993/1994 – As part of the Station E East enlargement and upgrading that commenced in 1993, PGE decided to remove the three previously decommissioned USTs (560-, 1,520-, and 2,140-barrel) at Station E East. During the initial phase of the removal of the three USTs, PGE discovered that the contents of the USTs had leaked into the surrounding soil. The release was reported to PGE System Control Center and the Oregon DEQ; see the document (Q62_12-28-1993_Oil Spill Questionaire.pdf) attached in response to Question 62, as well as the initial soil analytical data (Q15_1993-12-29.pdf) attached in response to Question 15. The contents of the USTs, the three USTs, and surrounding petroleum hydrocarbon-containing soil were removed and properly disposed; see the February 1995 UST Removal and Remediation report (Q15_UST Removal and Remediation 1995.pdf) attached in response to Question 15, as well as the TPS certificate of soil recycling (Q21a_1994 TPS Soil Recycling Cert.pdf) attached in response to Question 21a. • 1994 - During the enlarging and upgrading of Station E Substation, PGE also characterized the soil, gravel, and concrete at Station E East and Station E West for potential PCB contamination. The characterization of the soil identified locations of PCB contamination. In 1994, PGE remediated (removed) approximately 170,000 kg of petroleum hydrocarbon- and PCB-containing soil/gravel from Station E East and Station E West and disposed it at the Arlington Landfill; see the hazardous waste manifests (Q21a_1994-06-01_HazWaste Manifest 01407.pdf, Q21a_1994-08-25_HazWaste Manifest 01408.pdf, Q21a_1994-08-30_HazWaste Manifest 01409.pdf, Q21a_1994-08-30_HazWaste Manifest 01410.pdf, Q21a_1994-08-31_HazWaste Manifest 01411.pdf, Q21a_1994-08-31_HazWaste Manifest 01412.pdf, Q21a_1994-09-08_HazWaste Manifest 01451.pdf, Q21a_1994-09-09_HazWaste Manifest 01452.pdf,	Question 72 Attachments Q72_Sta E East 2006 Asb Sur.pdf Q72_Sta E West 2006 Asb Sur.pdf Also see Question 15 Attachments Q15_UST Removal and Remediation 1995.pdf Q15_1993-12-29.pdf Q15_2005 Site Investigation - Substation E.pdf Also see Question 21 Attachments Q21a_1994 TPS Soil Recycling Cert.pdf Q21a_1994-06-01_HazWaste Manifest 01407.pdf Q21a_1994-08-25_HazWaste Manifest 01408.pdf Q21a_1994-08-30_HazWaste Manifest 01409.pdf Q21a_1994-08-30_HazWaste Manifest 01410.pdf Q21a_1994-08-31_HazWaste Manifest 01411.pdf Q21a_1994-08-31_HazWaste Manifest 01412.pdf Q21a_1994-09-08_HazWaste Manifest 01451.pdf Q21a_1994-09-09_HazWaste Manifest 01452.pdf Q21a_1994-09-14_HazWaste Manifest 01453.pdf Q21a_1994-09-21_HazWaste Manifest 01454.pdf Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf Q21a_HazWasteManifest_Station E_2000.pdf Q21a_DEQ Hazardous Waste Site Report.pdf Q21a_Station E East_WAL_02-2004.pdf Q21a_Station E East_WAL_09-12-2003.pdf Q21a_2004 Hillsboro Landfill Tickets.pdf Q21a_2004 Concrete.pdf Q21a_Station E_NH WAL_05-22-2003.pdf Q21a_Station E_NH WAL_09-30-2003.pdf Q21a_Station E East_WAL_11-29-2004.pdf Also see Question 52 Attachment Q52_09.pdf Also see all Question 62 Attachments

EPA Question	Response	Records/Information Available
	Q21a_1994-09-14_HazWaste Manifest 01453.pdf, and Q21a_1994-09-21_HazWaste Manifest 01454.pdf) attached in response to Question 21a. • 1999/2000 – In 1999/2000, PGE removed the remaining Station E power plant building structures and foundations, as well as surrounding petroleum hydrocarbon-containing soils. In preparation for the building demolition, the building was sand-blasted to remove lead-based paint. In February 2000, the lead-based paint waste (paint chips, soil, PPE, and filters) was disposed at the Arlington Landfill; see the documents (Q21a_Hazardous Waste Info_Sta E_01-13-2000.pdf, Q21a_HazWasteManifest_Station E_2000.pdf, and Q21a_DEQ Hazardous Waste Site Report.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q52_09.pdf) attached in response to Question 52, the approximately 1,500 cubic yards of petroleum hydrocarbon-containing soil and demolition debris were likely disposed at the Hillsboro Landfill. • 2003/2004 - PGE conducted a voluntary site investigation of Station E East; see the August 2005 Station E Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. During the site investigation, a fourth previously decommissioned UST (2,140-barrel) was located at Station E East and PGE discovered that the contents of the UST had leaked into the surrounding soil. In early 2004, the fourth UST's steel liner, UST contents, and the surrounding petroleum hydrocarbon-containing soils were removed; see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. Also see the documents (Q21a_Station E East_WAL_02-2004.pdf, Q21a_Station E East_WAL_09-12-2003.pdf, Q21a_2004 Hillsboro Landfill Tickets.pdf, and Q21a_2004 Concrete.pdf) attached in response to Question 21a. • May 20, 2003 – Approximately 1 gallon of hydraulic oil from a trackhoe spilled on gravel within Station E East; see the document (Q62_05-20-2003_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 25 square feet of petroleum hydrocarbon-containing gravel were disposed at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the document (Q21a_Station E_NH WAL_05-22-2003.pdf) attached in response to Question 21a. • August 28, 2003 – Approximately 2 gallons of hydraulic oil from a PGE truck spilled on the gravel within Station E West; see the document (Q62_08-28-2003_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 300 square feet of petroleum hydrocarbon-containing gravel were disposed at either Hillsboro Landfill or Columbia Ridge Landfill after interim storage at Wilsonville (a PGE waste and used materials handling facility); see the document (Q21a_Station E_NH	

EPA Question	Response	Records/Information Available
	WAL_09-30-2003.pdf) attached in response to Question 21a. • November 16, 2004 – Approximately 0.5 gallon of diesel fuel from a Bobcat (mini hoe truck) spilled on soil and gravel within Station E West during construction activities; see the document (Q62_11-16-2004_Discharge Worksheet.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up. The approximately 9 square feet of petroleum hydrocarbon-containing soil and gravel (with < 0.2 ppm PCBs) were disposed at Hillsboro Landfill; see the document (Q21a_Station E East_WAL_11-29-2004.pdf) attached in response to Question 21a. In addition, the attached documents (Q72_Sta E East 2006 Asb Sur.pdf and Q72_Sta E West 2006 Asb Sur.pdf) contain information on the asbestos surveys conducted at the Station E Substation. The surveys identified asbestos containing materials the Station E East and Station E West control houses. To the best of PGE's knowledge, after reasonable inquiry, no remedial action has been taken concerning asbestos.	
73. Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, and hydrology or air quality on or about the Property? If so, identify: a. what the nature and scope of these investigations will be; b. the contractors or other persons that will undertake these investigations; c. the purpose of the investigations; d. the dates when such investigations will take place and be completed; and e. where on the Property such investigations will take place.	A site investigation and associated remediation were completed for the site in 2003/2004; see the August 2005 Site Investigation (Q15_2005 Site Investigation - Substation E.pdf) attached in response to Question 15. On 1 March 2006, the Oregon DEQ sent a Source Control Decision to the USEPA, which stated that the site (Station E Substation) is not a current or reasonably likely future source of contamination to the Willamette River and that no source control measures are required; see the document (Q50_2006-03-01 DEQ Source Control Decision.pdf) attached in response to Question 50. The site received a No Further Action determination by the Oregon DEQ on 6 December 2006 for the UST cleanup actions; see the document (Q50_12-06-2006 Norton.pdf) attached in response to Question 50. No future investigations for the Station E Substation are planned. Soil confirmation sampling may be conducted in the future, after cleanup of small spill events and general operational activities (e.g., removal, updates, maintenance), on an as needed basis.	See Question 15 Attachment Q15_2005 Site Investigation - Substation E.pdf Also see Question 50 Attachments Q50_2006-03-01 DEQ Source Control Decision.pdf Q50_12-06-2006 Norton.pdf
Section 8.0 - Corporate Information		
74. Provide the following information, when applicable, about you and/or your business(es) that are associated with each Property identified in response to Question 4:	Responses and documents for Section 8.0 – Corporate Information for all PGE sites are provided in a supplemental submittal (Supplemental Submittal S1).	

EPA Question	Response	Records/Information Available
a. state the current legal ownership structure (e.g.. corporation, sole proprietorship);		
b. state the names and current addresses of all current and past owners of the business entity or, if a corporation, current and past officers and directors;		
c. discuss all changes in the business' legal ownership structure, including any corporate successorship, since the inception of the business entity. For example, a business that starts as a sole proprietorship, but then incorporates after a few years, or a business that is subsequently acquired by and merged into a successor. Please include the dates and the names of all parties involved;		
d. the names and addresses of all current or past business entities or subsidiaries in which you or your business has or had an interest that have had any operational or ownership connection with the Properties identified in response to Question 4. Briefly describe the business activities of each such identified business entities or subsidiaries; and		
e. if your- business formerly owned or operated a Property identified in response to Question 4, describe any arrangements made with successor owners or operators regarding liability for environmental contamination or property damage.		

EPA Question	Response	Records/Information Available
75. List all names under which your company or business has ever operated and has ever been incorporated. For each name, provide the following information:		
a. whether the company or business continues to exist, indicating the date and means by which it ceased operations (e.g., dissolution, bankruptcy, sale) if it is no longer in business;		
b. names, addresses, and telephone numbers of all registered agents, officers and operations management personnel; and		
c. names, addresses, and telephone numbers of all subsidiaries, unincorporated divisions or operating units, affiliates, and parent corporations if any, of the Respondent.		
d. all information requested in (a) through (c) above regarding, but not limited to, the following entities and including their relationship to Respondent (e.g. whether these entities are business partners, separate entities, subsidiaries, and/or aliases etc. of Respondent):		
i. V & K Service, Inc.; and		
ii. Jinkz Corp.		
76. Provide all copies of the Respondent's authority to do business in Oregon. Include all authorizations, withdrawals, suspensions and reinstatements.		

EPA Question	Response	Records/Information Available
77. If Respondent is, or was at any time, a subsidiary of, otherwise owned or controlled by, or otherwise affiliated with another corporation or entity, then describe the full nature of each such corporate relationship, including but not limited to:		
a. a general statement of the nature of relationship, indicating whether or not the affiliated entity had, or exercised, any degree of control over the daily operations or decision-making of the Respondent's business operations at the Site;		
b. the dates such relationship existed;		
c. the percentage of ownership of Respondent that is held by such other entity(ies);		
d. for each such affiliated entity provide the names and complete addresses of its parent, subsidiary, and otherwise affiliated entities, as well as the names and addresses of each such affiliated entity's officers, directors, partners, trustees, beneficiaries, and/or shareholders owning more than five percent of that affiliated entity's stock;		
e. provide any and all insurance policies for such affiliated entity(ies) which may possibly cover the liabilities of the Respondent at each Property; and		
f. provide any and all corporate financial information of such affiliated entities, including but not limited to total revenue or total sales, net income, depreciation, total assets and total		

EPA Question	Response	Records/Information Available
current assets, total liabilities and total current liabilities, net working capital (or net current assets), and net worth.		
g. all information requested in (a) through (f) above regarding, if applicable, but also explain any corporate or financial relationship Respondent may have had or has with the Enron Corporation.		
78. If Respondent is a partnership, please describe the partnership and provide a history of the partnership's existence. Provide a list of all current and past partners of any status (e.g., general, limited, etc.) and provide copies of all documents that created, govern, and otherwise rules the partnership, including any amendments or modifications to any of the originals of such documents, and at least five years of partnership meeting minutes.		
Section 9.0 - Compliance With This Request		
79. Describe all sources reviewed or consulted in responding to this request, including, but not limited to:		
a. the name and current job title of all individuals consulted;	Ron Parr, Facility Management Supervisor Bob Millican, Facility Management Specialist Randy Nicolay, Facility Management Specialist Dave VanBossuyt; Distribution Administration Manager Mark Cooksey, IT Client Services Manager Laura Holgate, Power Supply Eng Services Supervisor Jeddy Beasley, Transportation Services Manager Jayne Allen, Environmental Services Specialist Arya Behbehani-Divers, Environmental Services Manager Brandy Horn, Environmental Services Specialist	Question 79 Attachment Q79_PdxHarbor Contact Information Rev.pdf

EPA Question	Response	Records/Information Available
	Mike Livingston, Property Services Manager Tim Calhoun, Network Communications Supervisor – retired Mike Schwartz, Power Supply Eng Services General Manager Rand Sherwood, Utility Services Manager Tom Stodd, Environmental Services Specialist Bob Lazrine Special Tester Forman Sid Hiller – Manager Kristina Rodgers – Assistant Debby Klinger – Specialist Chuck McCartney – Specialist Alma McGloghlon – Analyst Larry Morgan – Supervisor Gwen Williams - Manager In addition, the attached document contains additional sources consulted for responses to selected questions.	
b. the location where all sources reviewed are currently reside; and	PGE's Office at: 121 SW Salmon, 1WTC1302, Portland, Oregon 97204. Records are contained in the Facilities Management Departments, the Human Resources Department, and in the Corporate Records Information System (CRIS) database. In addition, the Hawthorne Retiree Museum contains the following: • The History of Portland General Electric Company, 1889 - 1981 • Electrifying Eden by Craig Wollner The History of Portland General Electric Company, 1989 - 1981 is attached in response to Question 77, which is part of the Supplemental Submittal S1. A hardcopy of Electrifying Eden was provided in a separate submittal.	
c. the date consulted.	Work on this information request was performed from February 2008 through October 2009.	
80. If not already provided, identify and provide a last known address or phone number for all persons, including Respondent's current and former employees or agents, other than attorneys, who have knowledge or information about the generation, use, purchase, storage, disposal, placement, or other handling of hazardous materials at, or transportation of hazardous substances, waste, or materials to or from each Property identified in	Station E Substation is an unmanned substation, requiring only periodic maintenance and monthly inspections. See the responses and documents for Questions 2, 6g, 15, 21, 38, 40, and 79.	See all Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Bullseye articles.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf Q06g_Organizational Charts.pdf Also see Question 15 Attachments Q15_2004 HAI Field Notes.pdf Q15_2004 Sulzer TP & Station E Stack Field Notes.pdf Q15_2004 UST Removal Field Notes.pdf Q15_2005 Site Investigation - Substation E.pdf Q15_UST Removal and Remediation 1995.pdf

EPA Question	Response	Records/Information Available
response to Question 4.		Also see all Question 21 Attachments Also see all Question 38 Attachments Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf Also see Question 79 Attachments Q79_PdxHarbor Contact Information Rev.pdf
81. If any of the documents solicited in this information request are no longer available, please indicate the reason why they are no longer available. If the records were destroyed, provide us with the following;	PGE Records Management Services (RMS) provides a uniform records management program for the company. The program includes the Corporate Records Information System (CRIS) an online application used by departments to identify, index and manage their records. RMS also provides records storage and retrieval and document imaging services. RMS can investigate why records are no longer available if we know which records are being sought. Knowing the date, originator and subject of the records in question are essential to determine their availability or their ultimate disposition. Each unique record category is identified in CRIS and assigned a file pattern code (file category). Information about each file category includes the office of record (originator), and retention requirements and regulatory citations – who requires the record to be kept and for how long. The PGE records program and records retention schedule comply with the recordkeeping requirements of the Oregon Public Utility Commission (PUC) and Federal Energy Regulatory Commission (FERC). State and federal guidelines require us to identify which records PGE produces and how and for how long those records will be retained. PGE Policy requires that records should not be destroyed before, or kept after, meeting retention requirements. Consequently, PGE regularly destroys records in the normal course of business, and when legally required to do so. Such destructions are approved by the PGE Records Retention Committee and authenticated and recorded by RMS. How long a particular type of record is retained is based on operating needs, legal and regulatory requirements and, in a few cases, historical or archival value.	
a. the document retention policy between 1937 and the present;	RMS was created in 1977 and we can provide PGE's records management guidelines from 1977 to the present. Prior to that time records management was the responsibility of each functional area, plant or division office. Accounting records were kept in compliance with 18 CFR Part 125, Regulations to Govern the Preservation of Records of Public Utilities and Licensees (1972), issued by the Federal Power Commission (now FERC) and NARUC, the Nat'l Assoc. of Regulatory Utility Commissioners.	

EPA Question	Response	Records/Information Available
b. the approximate date of destruction;	See the response to Question 81a, above. Since it was established (c. 1977) RMS has maintained a hardcopy or microfilm record of boxes of records destroyed in the normal course of business, if those records were turned over to RMS custodianship. To know *when* a record was destroyed, it is necessary to know the record category, the approximate date of creation, and which department created it. It should be noted that the level of detail of information about the records destroyed is the same as that used to identify the records when they were sent to storage.	
c. a description of the type of information that would have been contained in the documents;	See the response to Question 81b, above. RMS can help discern what records were typically filed in a particular file category. If similar records from that era exist they may show what information was captured by the documents. For example, a typical "job" form from 1980 would include much the same information listed on a similar job form from 1940, i.e., the work location, equipment used, labor hours, parts, drawings, etc.	
d. the name, job title and most current address known by you of the person(s) who would have produced these documents; the person(s) who would have been responsible for the retention of these documents; the person(s) who would have been responsible for destroying the documents; and the person(s) who had and/or still have the originals or copies of these documents; and	RMS is responsible for all records sent to the records center from 1977 to present, including ultimate disposition of those records. Records of documents destroyed include the names of the originator, authorizations for destruction (signatures) and the name of the person who physically destroyed or recycled the documents. Individual Responsibility Center (RC) managers are and would have been responsible for maintaining and disposing all other records, i.e., those that were not sent to the archives.	
e. the names and most current addresses of any person(s) who may possess documents relevant to this inquiry.	RMS can provide printed reports from the CRIS of existing records related to the request (that have been entered into CRIS by the originating RC). CRIS shows the names of all departments using the system for managing their records, what categories of records are maintained and where the records are filed (in the department or the records storage center). On request, RMS can provide a list of all RCs that use the CRIS system. This report would show each RC's file plan by document type (or subject) and the types of documents that should be filed under those headings.	
82. Provide a description of all records available to you that relate to all of the questions in this request, but which have not been included in your responses.	Multiple key word searches were performed in PGE's CRIS system. No date restrictions were placed on the searches. The results from each key word search were printed from the CRIS system with either a list of record titles or a "There are no entities to display" message. The "There are no entities to display" message means that based on the search query no records were found. Individual CRIS printouts are available upon request but provide no additional information. Documents not included in this request include: • Documents describing other PGE sites	

EPA Question	Response	Records/Information Available
	• PGE internal emails, correspondences, documents not specifically relevant to these questions • Documents determined to be Attorney-Client privileged, which are identified on the comprehensive privilege log that will be submitted with the final set of responses. • Duplicate documents/figures • Emails and draft or internal documents between PGE and consultants • Purchasing agreements /invoices/payment records for remediation and environmental consultants, laboratory analysis, and Oregon DEQ oversight costs • Cost proposals for remediation/environmental consultants • Site Health and Safety Plans for remedial activities • Duplicate documents/figures • Adjacent street utility clearance/right of way permitting documentation • Database of OSHA reportable accidents/injuries for PGE properties in Oregon • Two general information documents – Theory on Sand Berms and Theory on Oil Spill Containment Products	